The Keystone Modeler

Pennsylvania Railroad Technical & Historical Society

No. 80 Spring 2012

Inside:

The Keystone Modeler
Pennsylvania Railroad Technical & Historical Society

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FRONT COVER

This impressive shot by Bill Neale shows one of PRR's huge N1s Santa Fe 2-10-2 locomotives on PH11 working freight at the Ohio River Bridge. The insets are of Con-Cor's new MP54 MU coach (Tim Garner photo) and Chuck Cover's photo of his Northumberland coaling tower.

BACK COVER

After a long absence, the Broadway Limited K4s is coming back on the market. Here's a model from the earlier run on Tim Garner's layout.

The Keystone Modeler

Manuscripts and photographs submitted for publication are welcome. Materials submitted are considered to be gratis and no reimbursement will be made to the author(s) or the photographer(s) or his/her representative(s). The Society reserves the right to reject, for any reason, any material submitted for publication.

Please contact the editor for information and guidelines for submission. Photo files 800x600 pixels or larger in JPG format are preferred. Statements and opinions made are those of the authors and do not necessarily represent those of the Society.

The Keystone Modeler on CD-ROM

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Disc 7	Winter 2010 to Autumn 2010	*TKM* Nos. 72 – 75
Disc 8	Spring 2011 to Winter 2012	*TKM* Nos. 76 – 79

Each disc is $15.00. There is also a disc containing all issues from 1 to 48 for $60. If you are a resident of Pennsylvania, please include PA sales tax. Send a check or money order in US dollars payable to PRRT&HS to:

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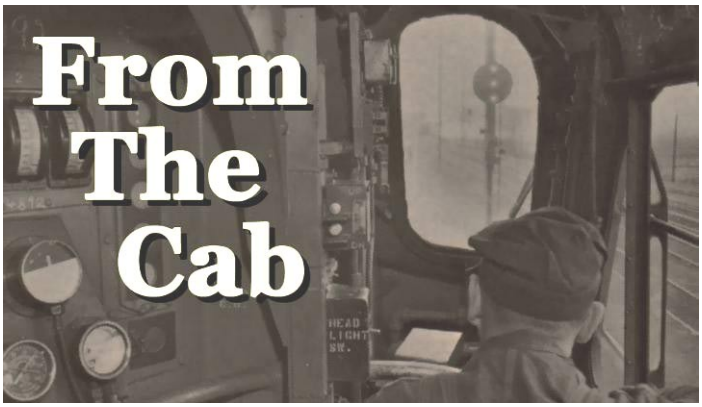

In the editorial for the winter, 2012 issue of *TKM*, I asked readers to email me their opinion about whether to change our on line magazine to landscape format or retain the current portrait format. By a two to one margin, readers voted to keep the present format. So, for the foreseeable future at least, *TKM* will retain the portrait format. I was disappointed, however, in the relatively small number of readers who took the time to respond. Surely, they represent only a minority of our readership, but those who voted made the decision for all of us. (Sounds like an election, doesn't it? And if you don't vote, you have no right to complain.)

Something else related to modeling in our society is about to change, though. The feeling has been growing among members of the Modeling Committee and among various members of the PRRT&HS that it may be time to retire the modeling contest and replace it with a simple opportunity to display our modeling efforts. That is the way things are at Railroad Prototype Modelers' meetings which many of our members attend, and many of the models brought to our annual meetings are not entered into the contest.

At the beginning of the Modeling Forum at the annual meeting, Elden Gatwood decided to conduct an informal poll by a show of hands. The majority on that afternoon voted to eliminate the contest. There has been no formal announcement yet, but I suspect that by next year's meeting, or the following one, we will all just bring our models for display, not for competition. That would be a positive thing, in my opinion, because our contests have typically been more like popularity contests than competitions with defined criteria, and because I like a more relaxed atmosphere in which we can learn from one another rather than try to outdo one another.

For our Spring *TKM*, we present two product reviews by Al Buchan, our Editor Emeritus, a review of the new MP54E MU cars from Con-Cor by Tim Garner, and Chuck Cover's scratchbuilt coaling tower. There is also an N-scale heavyweight observation article by Claus Schlund, and some great photos by Bill Neale and Chuck Cover.

Jim Hunter, Editor

The Pennsylvania Railroad Technical & Historical Society

The purpose of the Pennsylvania Railroad Technical & Historical Society is to bring together persons interested in the history and modeling of the Pennsylvania Railroad, its subsidiaries and its acquired companies. Our goals are to promote the preservation and recording of all information regarding the organization, operation, facilities, and equipment of the PRR.

The Society's quarterly illustrated journal, *The Keystone*, has been published continuously since 1968. Each issue of 64 or more pages contains illustrated original authoritative articles about locomotives, cars, other equipment, facilities, and operating practices of the PRR. The Society also publishes its own thoroughly researched books and other materials concerning PRR history. *The Keystone Modeler* is also a quarterly special 30-plus page online publication of the Society.

The Society meets annually, usually during a weekend in early May, providing an opportunity for its members to get together and learn more about the PRR. Local chapters around the country also provide members and guests with regular meetings that feature PRR related programs.

Information about our Society may be found on our website – www.prrths.com. To join the Society, send $35.00 to:

PRRT&HS
PO Box 54
Bryn Mawr, PA 19010-0054

All memberships are for a calendar year, back issues of The Keystone for the current year are sent upon joining. Overseas membership has added postage fees.

PRRT&HS Interchange

Selected Society Merchandise of Interest to Modelers

PRR Equipment Drawings on Microfilm

Copies of PRR equipment drawings are available from the Society's microfilm collection. To order drawings, you must know the drawing number and title. Ordering information and lists of arrangement drawings are available on the Society's website. Go to www.prrths.com, select National Society, and then The Interchange. If you require a printed copy of this information, please send your address and a check for $2.00 made out to PRRT&HS to:

Richard C. Price
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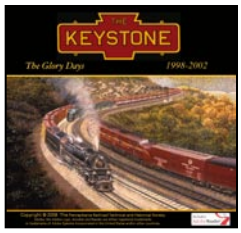
McVeytown, PA 17051

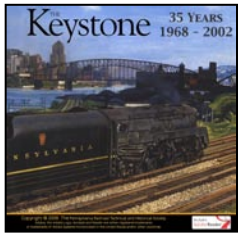
The Keystone CD 5



The Keystone CD No. 5, The Glory Days, covering 1998 to 2002, is now for sale at the price of $75 for members. New Jersey residents add $5.25 sales tax. Order CDs from:

Al Buchan
785 Cornwallis Drive
Mt. Laurel, NJ 08054-3209

The Keystone DVD 1



The Keystone DVD No. 1 covering 35 years of *The Keystone* from 1968 to 2002 is available. The navigation of this product is being upgraded as are some of the administrative notes and text. The improved edition will be ready for ordering soon. Those few who have already purchased the DVD will be able to trade it in for a new one when it's available. The price of this DVD is $375. ***This DVD requires a computer with a DVD drive. It is NOT a video disk that can be played on a DVD player for viewing on your TV.***

The Keystone Modeler
NEWSWIRE
With Steve Hoxie

PRR Product News

AMERICAN ARCHETYPE MODELS
http://www.americanarchetypemodels.com/
PRR Electric Switcher, Class 3/8000 – N Scale

(American Archetype Models photo)

New to these pages, **American Archetype Models** has some interesting scenic details for N scale. The highlight is this non-powered hard rubber tired switcher which would make an interesting addition to an urban scene. The penny is in the photo to show actual size. See the website for additional info and other products.

ATHEARN
http://www.athearn.com/Articles/Hobbywire.aspx
PRR GP-9 Diesel Engine-HO Scale

Athearn has announced Genesis models of the GP-9 in both Phase I and II body styles and in three different paint and lettering schemes. The models are ready-to-run, equipped with sound/DC/DCC decoders from Soundtraxx. Delivery is expected in December 2012.

BOWSER MANUFACTURING
http://www.bowser-trains.com/
PRR H21A 4 Bay Hopper – HO Scale

(Bowser Photo)

Bowser has announced a new run of the classic H21A in several paint and lettering schemes with new road numbers.

BROADWAY LIMITED IMPORTS
http://www.broadway-limited.com/
PRR H10s 2-8-0 Consolidation Locomotive – HO Scale

(BLI Photo)

BLI has announced the H10s to be available April 2013. The model will be part of the Paragon 2 line. It is expected to include the 80F81 tender.

PRR K4s 4-6-2 Pacific Steam Locomotive – HO Scale

(BLI Photo)

BLI has announced another run of the popular K4s, due in November 2012 in the Paragon 2 line. Two versions are expected, "Pre-war" and "50's".

PRR I1sa 2-10-0 Decapod Steam Locomotive – HO Scale

(BLI Photo)

As if the H10 and K4 were not enough, **BLI** has also announced another run of its I1SA in its Paragon 2 line. Equipped for sound, DC, and DCC, there will be original headlight and modern headlight versions, and both will be available with either the original 90F82 short tender or the 210F82A long tender. The model is due in October 2012.

CONCEPT MODELS
http://www.con-sys.com/
PRR Queen Mary FD2 Flat Car – HO Scale
PRR FW1 Well Flat Car – HO Scale

FD2 Flat Car (Concept Models photo)

FW1 Flat Car (Concept Models photo)

Concept Models has available at their website resin kits of these two unique heavy duty flat cars. Additional models are in development.

FUNARO & CAMERLENGO
http://www.fandckits.com/
PRR X26 USRA Boxcar – HO Scale

(F&C photo)

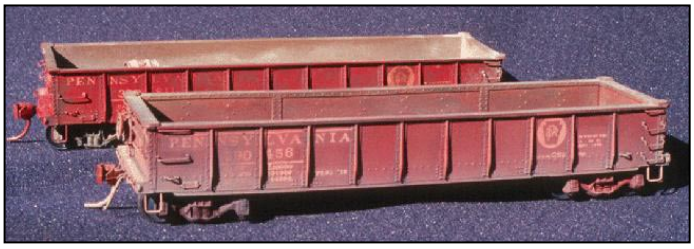
F&C has available a resin kit modeling the USRA single sheathed wood sided boxcar which the PRR classed as X26. The kit models the car as it was modified and upgraded, serving through the 50's. Three versions are available with Youngstown (shown), spliced Youngstown, Creco, and spliced Car Builders doors.

PRR G28 Gondola – HO Scale

(F&C photo)

F&C has also made available a resin kit modeling the G28 class of steel 52'6" gondola. There have been articles on The G28 class in *TKM*. See No. 53, December 2007, and No. 57, April 2008.

MOUNT VERNON SHOPS
http://www.mountvernonshops.com/
PRR (and a few others) Decals-HO Scale

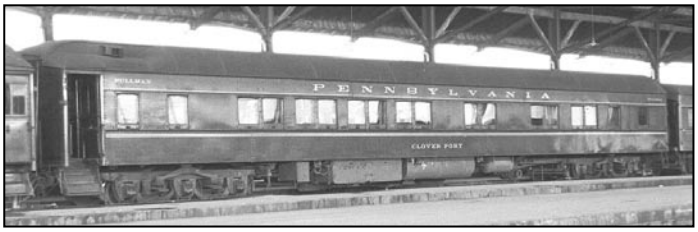


PRR GS and GSH (TKM Photo)

John Frantz's **Mount Vernon Shops** has become a prolific provider of high quality decals for use on (mostly) PRR freight cars. His latest offerings are decals for the GS and GSH class gondolas. In HO, GS gons are available from Bowser, F&C, and Sunshine, and the GSH class is available from F&C and

Sunshine. These high quality decals are very appropriate for upgrading any of these models. These gons were covered in a very comprehensive article in *TKM* No. 4, November 2003.

NKP Car Company
http://www.nkpcarco.com/
Pullman 8 Section 5 Double Bedroom "Clover" Heavyweight Sleeper – HO Scale



With the high quality passenger offerings from Branchline (now offered by Atlas) and Walthers, PRR modelers have been able to "almost" model the consists of our favorite passenger trains. "Almost" because these companies have not been able to offer every type of sleeper or parlor car that we need. **NKP Car Co.** has been filling this niche and is offering the much needed "Clover" series car with a Branchline core and details along with high quality etched brass sides. Plans 4036A, 4036B, and 4036C are being offered. From Stegmaier's *Pennsylvania Railroad Passenger Trains, Consists and Cars-1952*, the Clover cars served in The *Pennsylvania Limited*, *Red Arrow*, *The St. Louisan*, *The American*, the *Philadelphia* and *Pittsburgh Night Expresses*, as well as the *Dominion Express* and *Northern Express*. For car names and other info see Garry Spear's site, http://prr.railfan.net/passenger/GSPEAR/ .

Additionally, **NKP Car Co.** has plans to produce the 8-section, buffet-lounge cars, Plan 3989. See *The Keystone*, Vol. 22, No. 2, Summer 1989, for an extensive article on these popular cars.

PRR-Parts
http://www.prr-parts.com/
PRR Passenger Car Ice Bunkers – HO scale

PRR P70 ice bunker. (PRR Parts photo)

PRR ice bunker and water tank on a Bachmann P70. (PRR Parts photo)

As seen at the 2012 Annual Meeting, **PRR-Parts** has pilot models of air conditioning ice bunkers, water tank, and other underbody details for P70 and related classes. Production aspects are being worked on, and the owner says they will be available soon. These parts are resin with etched brass handles.

Wilson's Model Works
http://groups.yahoo.com/group/PRR-Modeling/files/Decals/
PRR Decals – HO Scale

Dave Wilson continues to add to his line of excellent PRR steam engine and passenger car decals. He has a catalog at the link above.

Upcoming Events

June 23 Richmond, California
Bay Area Prototype Modelers Meet
http://www.bayareaprototypemodelers.net/

June 23-24 Timonium, Maryland
Great Scale Model Train Show
http://www.gsmts.com/

June 27-July 1 Medford, Oregon
20th Annual National N Scale Convention
http://nationalnscaleconvention.com/

July 3 – 4 Spencer, North Carolina
Norfolk Southern Heritage Units Family Portrait
North Carolina Transportation Museum
http://www.nctrans.org/

July 27 – 28 St. Louis, Missouri
St. Louis RPM Meet
http://home.mindspring.com/~icg/rpm/stlrpm.htm

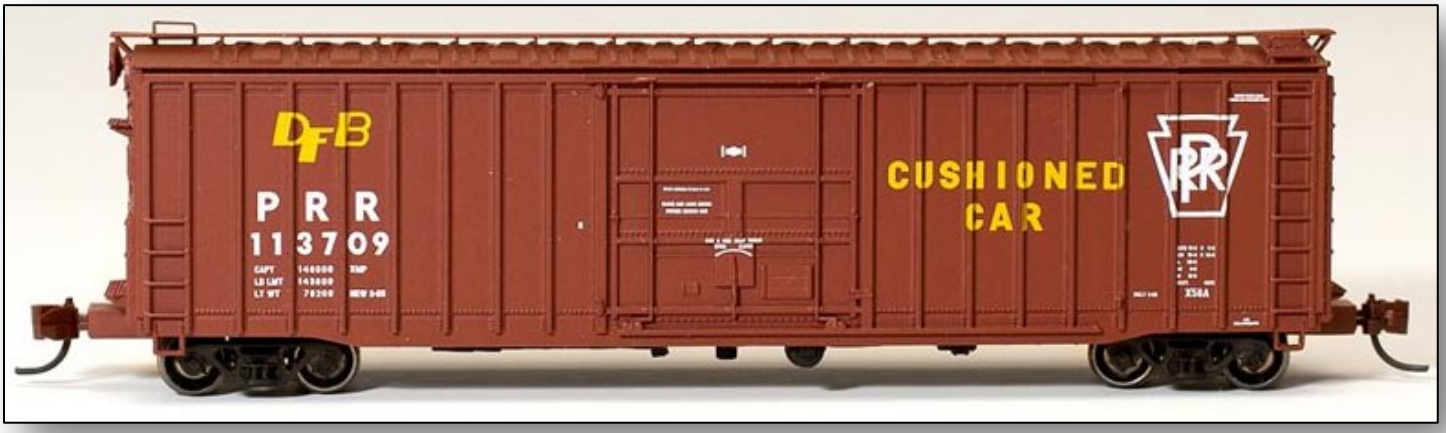
July 29 – August 4 Grand Rapids, Michigan
NMRA National Convention
http://gr2012.org/

October 11 – 13 Strasburg/Lancaster, Pennsylvania
Fine Scale Model Railroader Expo
http://www.modelrailroadexpo.com/

October 13 Seattle, Washington
Pacific Northwest Railroad Prototype Modelers
http://www.northwestrpm.com/

Product Review – Eastern Seaboard Models Corporation N-Scale PRR Class X58A Boxcar

By Al Buchan



(Bob Buchan photo.)

The Prototype

The PRR had a fleet of 432 class X58A boxcars as of October 23, 1967. In addition to the subclass "A," the PRR also rostered X58, X58B and X58C cars. The X58 series cars were very distinctive in that they were the Pennsy's only all steel outside braced boxcars, except for the late 1940's class X36 – one of a kind PRR 103500. These cars were turned out at Sam Rea Shops in 1965 and were all contained with the series 112000 to 118490. They were AAR Mechanical Class RBL (insulated bunkerless refrigerator car with load restraining devices), while the subclasses were all AAR Mechanical Class XM, XL or XP boxcars.

The Model

The specific model reviewed is ESM's stock number 222105, PRR 113709, with roofwalk, high ladders and brake wheel and Hydro-Cushion underframe. These RTR models are made and assembled in China, the trucks are made in China by BLMA while the body mounted couplers are made in the US by Micro-Trains® Line. It is recommended for use on curves of more than 10-inch and greater radius. This specific car was placed in service in March 1965 (according to the stenciling, the box says April 1965) and paint and lettering is based on a March 1968 photograph. Looking at it right out of the box was a wow for me, as I haven't really looked at N-scale equipment in quite some time.

The X58A PRR 113709 is AAR Mechanical Designation XP, AAR Car Type Code A220. It falls in a series of 200 similar cars numbered 113687 to 113886. The load restraining device on this car is specified as "DFB."

The FCC looks to me to be right on for the period and the lettering is exquisite, neatly wrapping around the outside braces and the correct colors (white and yellow). I could read it all, even the trust data, of course with a magnifying glass. The only lettering flaws I could see were the lube data being "LUB SRS 11-16-65 PRR," and the paint data on the end of the car "PAINT SRS 11-65." At least this is what I saw through the magnifying glass.

The lube data indicating it was last serviced at Sam Rea Shops on November 16, 1965, and the paint data indicating painting in November when the car was out shopped in March is problematic. It certainly didn't sit at SRS for eight months awaiting these services. However, this is rivet counting and certainly doesn't detract one iota from the model. The car and cushioning housing are painted FCC, while the couplers and underside are black.

The underside brake rigging and cushioning devices appear to be correct and even include piping about as fine as one can get with plastic and still be durable. I was impressed. The roofwalks are see-through super-fine that puts some of my HO-scale models to shame. The overall dimensions check out well.

This model is a definite keeper. By the time you read this some lucky N-scaler will have picked this up at the annual meeting raffle. If you're modeling this time period I recommend getting one and get a LV one also as they were a product of SRS and found their way in many PRR manifest freights. It comes in the variations listed – As-Built body – with roofwalk, high brake gear, high ladders; Transitional body – no roofwalk, high brake gear, low ladders except for the A end; Transitional body variant – no roofwalk, high brake gear, high ladders; Modern – no roofwalk, lowered brake gear, low ladders; and Hydra-Cushion or Keystone cushioned underframe.

Product Review – ExactRail Platinum Series HO-Scale PRR Class H47A Covered Hopper

By Al Buchan

(Bob Buchan photo.)

THE PROTOTYPE

As of October 23, 1967, the PRR had a fleet of 50 class H47A covered hoppers in series 260656 to 260705. In addition to the subclass "A," there were also 100 plain H47 cars in series 260871 to 260910. The X47 series cars were distinctive in that they were the Pennsy's only non-painted all aluminum cars (with steel underframes).

These 4750 cu. ft. cars were turned out by Magor Railcar Division of Fruehauf Corp. in 1965. The X47 and 47A were AAR Mechanical Designation LO and AAR Car Type Code L052. The H47 and H47A had the same dimensions and it is not understood why there were two different classes. There were no footnotes in the ORER to provide clues as to the differences.

THE MODEL

The specific models reviewed are ExactRail's stock number EP-81004-4, PRR 260683 and EP-81004-3, PRR 260672, with trough hatches, roofwalk, high ladders and brake wheel, separate air line across bottom chord, cut levers, air hoses and individual drop grab ladders. These ready-to-run models are designed and tooled in the USA and made in China. These specific cars were placed in service in December 1965 Looking at it right out of the box this appears to be an excellent model.

The car body color is aluminum with exquisite crisp black lettering. I could read it all without a magnifying glass. The lettering matches exactly that in the prototype photo. The A-end brake rigging appears to be correct and even includes fine piping. I was impressed. The roofwalks are superfine see-through aluminum. I think I would give the car an overcoat of clear dull, as raw aluminum didn't have too much of a sheen.

The overall dimensions check out very well. This model is a definite keeper.

By the time you read this two lucky HO-scalers will have picked them up at the annual meeting raffle. If you're modeling this time period I recommend getting one. Depending on the industries served perhaps even two.

Product Review – Con-Cor's MP54 MU Cars

By Tim Garner – Photos by the author unless noted

Con-Cor's new MP54 MU cars are impressive in looks and operation.

Congestion on the commuter lines radiating from Philadelphia, exacerbated by the extra movements to turn and service steam engines, led the PRR to electrify the Main Line from Broad Street Station to Paoli in 1915. The system of 11,000 volt, single phase, 25 cycle A.C. power would be the first installation of what eventually spread over PRR's eastern mainlines. As part of the project, the Altoona shops rebuilt hundreds of steam-era MP54 suburban cars to electric multiple-unit coaches and trailers.

The electrified commuter service ultimately expanded in the Philadelphia area to reach Chestnut Hill, Fort Washington, West Chester, Wilmington, and Trenton. As electrification reached its ultimate limits in the 1930's, electrified commuter service expanded to include Baltimore to Washington, the Princeton Branch, and New York to Trenton, and New York to South Amboy among other routes.

To meet this demand, the fleet of MU cars grew to include 361 coaches and 43 unpowered trailers, plus combines, full baggage cars, and mail-baggage cars. All were 64 ft. 5¾ in. long. Their classes are listed in the table at right.

Beginning in 1950, PRR rebuilt 99 cars with new smoother-riding equalized trucks, stainless steel window frames, and updated interiors. Only these MP54 cars survived into the Penn Central years as growing numbers of stainless steel Budd cars took replaced them.

The Long Island operated the first electrified MP54 cars beginning in 1908. They operated on 650 volts of D.C. current fed through a third rail. Ultimately, LI received 626 powered coaches, 15 baggage cars, 52 coach-baggage, and 230 unpowered trailers.

PRR MP54 MU Cars

Type	*Classes*	*Description*
Coach	MP54E1, MP54E2	72 seats, 1 restroom
Coach	MP54E3	Additional horsepower to pull unpowered trailer, 72 seats, 1 restroom
Modernized Coach	MP54E5 , MP54E6	72 seats, 1 restroom, 99 cars
Coach-Trailer	MP54T	72 seats, 1 restroom, 43 cars
Passenger-Baggage	MPB54E1, MPB54E5	52 seats, 1 restroom, 17 ft. 8 15/16 in. baggage compartment
Passenger-Baggage	MPB54BE2, MPB54BE3	40 seats, 1 restroom, 26 ft. 2 15/16 in. baggage compartment
Baggage	MB62E1, MB62E2	
Baggage-Mail	MBM62E1, MBM62E2	20 ft. mail apartment

Opposite sides of the powered coach. Based on the exterior details, this appears to be a model of the MP54E2.

The Con-Cor Model

The models are impressive right out of the box and totally capture look and personality of the prototype. The coaches appear to be a spot-on match to the MP54E2. I did not order copies of the trailer, combine, or baggage-mail versions because of their relative prototype rarity, but photos of the models on Con-Cor's web site suggest they are just as impressive. Con-Cor did not model the baggage-only cars.

Exterior Details

The models feature a host of separately applied parts including grab irons, safety chains, windshield wipers, brake and signal hoses, MU receptacles, air whistles, and roof details. One surprise is that the underside of the trap doors over each set of steps includes a rarely modeled handrail needed by boarding passengers when the trap is open.

The spring-loaded pantograph is an entirely new model designed to match those on the MP54 right down to the single pick-up shoe, air cylinders, and two-level base. The underbody is fully detailed.

On the MP54E2, the power truck below the pantograph is equipped with roller bearings. The unpowered truck at the opposite end is a different design with friction bearings. The model duplicates this detail. Trucks also have pilots on each end. The cars are equipped with brown plastic magnetic couplers with coil springs. I plan to replace mine with short-shank scale metal couplers.

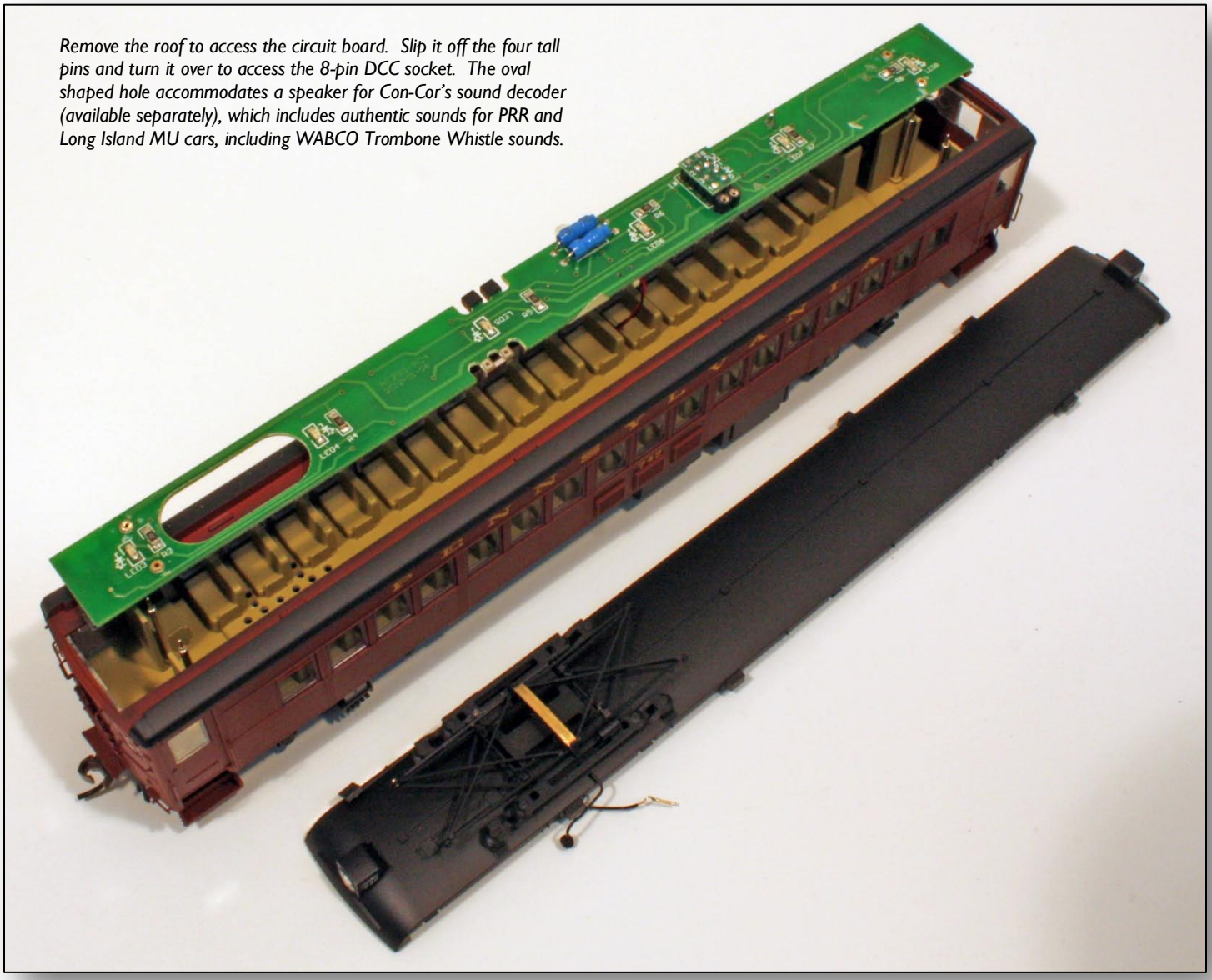
Interior Details

Each coach includes an interior molded in tan styrene. The coach seats, lavatory, and bulkheads are modeled. To provide room for weight and the motor, the seats bottoms are not full height. This is not noticeable through the windows.

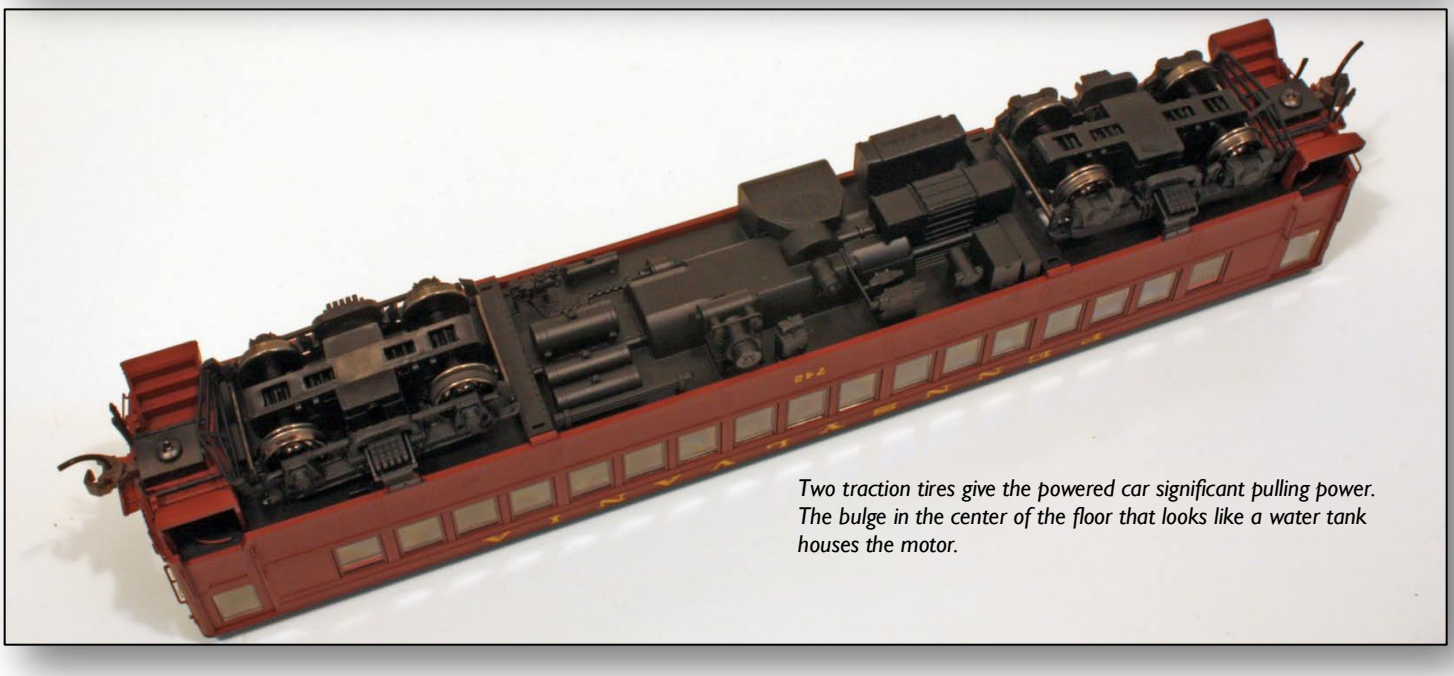
Electrical and Operation

The powered car is wired for straight DC operation, but it is DCC ready. Carefully snap off the center of the clerestory roof and you will expose a printed circuit board. On top of the board is a socket for a wire coming from the pantograph. There are two micro slide switches. One turns off the headlights for mid-train cars and the other activates power collection from the pantograph. The LED headlights are on the top of the board and the LED interior lights are on the bottom. As on Con-Cor's earlier suburban MP54 cars, all the lights are amber which makes the effect too orange for my taste – my only criticism of these cars.

▲ *Opposite ends of the powered car. The level of detail is amazing. Note the marker lights, windshield wipers, air whistle, chains, grab irons, cut levers, MU receptacles, hoses, and door latches.* ▼ *The pantograph details are exceptionally accurate.*



Remove the roof to access the circuit board. Slip it off the four tall pins and turn it over to access the 8-pin DCC socket. The oval shaped hole accommodates a speaker for Con-Cor's sound decoder (available separately), which includes authentic sounds for PRR and Long Island MU cars, including WABCO Trombone Whistle sounds.



Two traction tires give the powered car significant pulling power. The bulge in the center of the floor that looks like a water tank houses the motor.

The circuit board is supported on four metal pins coming up from the floor. You can carefully lift the board off the pins (a press fit into four sockets) and turn it over to expose the 8-socket DCC plug. Any decoder with an 8-pin plug will fit. Con-Cor offers a sound decoder and speaker for the MP54. A hole for the speaker is provided in the circuit board and holes in the floor allow the sound to escape.

The circuit board in non-powered cars is similar except there is no provision for a decoder. There are micro slide switches for headlights and pantograph power selection.

The powered car is driven by a small-diameter double-ended motor contained in a cavity in the underbody at the center of the car. Drive shafts power all four axles on the car. This amazing piece of miniature engineering means the motor is not visible in the interior of the car and appears as a water tank in the center of the underbody. All eight wheels pick up current on both the powered and unpowered cars.

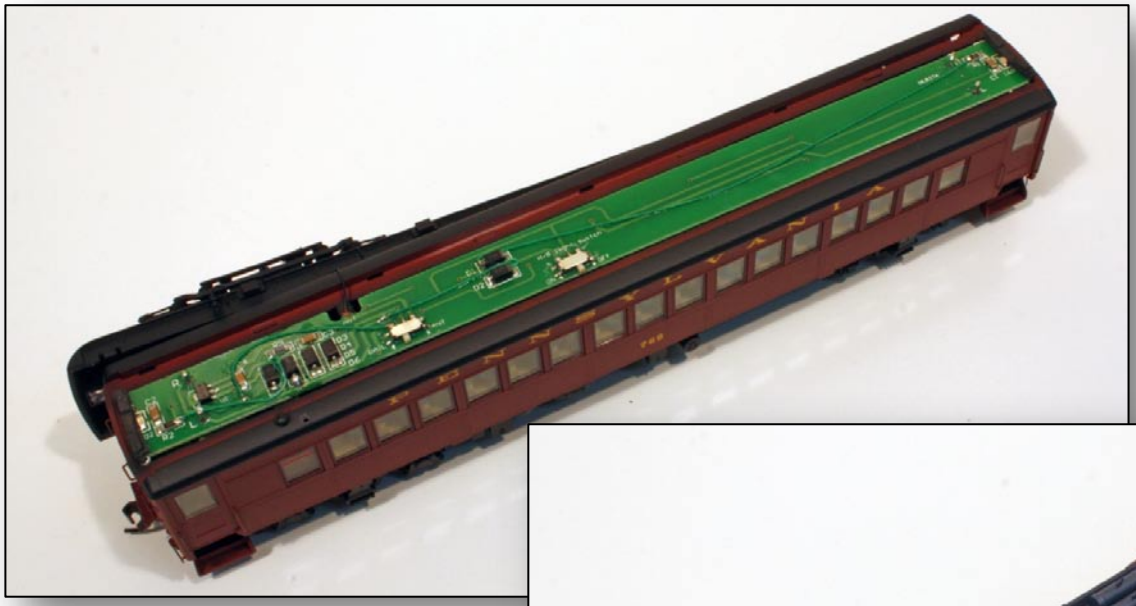
It also has surprising pulling power thanks to one traction tire on each powered truck. I coupled three unpowered MP54 and six of Con-Cor's MP54 suburban coaches to a powered unit and it pulled the entire train up a 2% grade without slipping. Most photos of MU trains I've seen are six cars or less, so you could easily get by with one powered car per train.

Adding Detail

Since the car interiors are lighted, I would recommend painting the interiors and adding figures to the seats. Because the seats are not full height, you'll need to cut off the legs of seated figures before you cement them in place so they appear proper height through the windows. You should also cement a standing figure as an engineman behind the right front portal of your lead car. Adjust the height of his legs until his face appears in the center of the portal window.

Light weathering of the underbody and roof would be appropriate. I typically use Floquil Railroad Tie Brown on underbodies, trucks, and wheels to suggest railroad grunge with a hint of rust.

Overall, Con-Cor did an excellent job with these models. As a result, I would not be surprised if the price of Alco Models brass MP54s takes a nosedive on eBay.



▲ *The micro slide switches for the pantograph and the headlights are visible on the circuit board for the unpowered car. The interior lights remain on when the headlight switch is turned off. There is no provision for a decoder in non-powered cars.*

► *The underbody of the unpowered car is slightly different since no accommodation for the motor is necessary. All eight wheels pick up power for the car lighting.*

▲ *Even without catenary, these cars make a great looking train.* ▼ *The red-orange glow of the amber LEDs is my only issue on these exceptional models.*

Paint Schemes

- *PRR unlettered* – post war Tuscan sides, black roof
- *PRR Pre War* – light Tuscan, boxcar red roof, olive trucks
- *PRR Post War* – dark Tuscan sides, black roof
- *PRR 1960's* – dark Tuscan, large keystones
- *Long Island Tuscan* – dark Tuscan sides, black roof
- *Long Island Gray* – Tichy gray, white, white lettering

PRR cars available

- Powered Coach
- Powered Combine
- Powered Baggage-Mail
- Non-Powered Coach
- Non-Powered Combine
- Non-Powered Baggage-Mail
- Non-Powered Trailer Coach

Notes: All cars include a pantograph except the trailer coach. The combine matches class MPB54E1.

Long Island cars available

- Powered Coach
- Powered Combine
- Powered Baggage-Mail
- Non-Powered Coach
- Non-Powered Combine
- Non-Powered Baggage-Mail

Notes: Cars include dummy third rail shoes.

Decoders

- Sound plug-in decoder with speaker and housing
- Non-sound plug-in decoder

Scratchbuilding the Northumberland Concrete Coaling Tower

By Chuck Cover

The Northumberland engine facility was located midway in the yard. The concrete tower was constructed as a replacement for the large timber coaling trestle built when the yard was first opened in 1911. It was very similar in design, with recessed panels on the ends, to the larger concrete coaling towers built in Renovo in 1941 and Southport in 1942 as the Pennsy upgraded its facilities to handle WW II traffic. These towers provided both coal and sand.

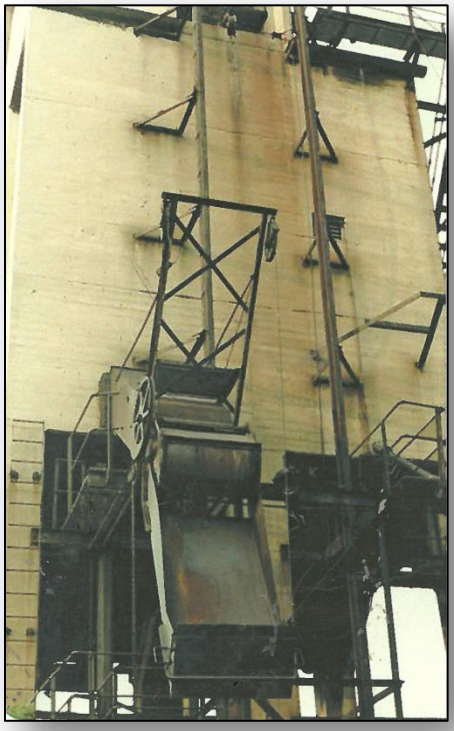
The "Norry" coaling tower had a delivery track running through the center between the six legs where hopper cars could dump their loads through grates into a pit beneath the slightly elevated track siding below the tower. A skip hoist bucket on vertical tracks with a pulley mechanism, which looks similar to a Fairbanks-Morse design, picked up loads of coal from the pit and moved the coal to the top of the tower. The lift mechanism was located on the outside of the Norry tower, but sat in a recess on the larger towers in Renovo and Southport. After numerous trips up the lift mechanism, the tower would be filled and ready to service the locos.

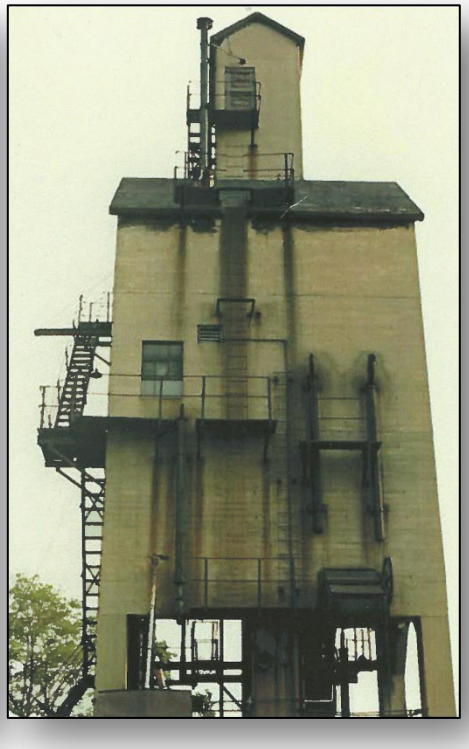
The finished coaling tower on my layout.

The Norry tower could service locomotives on two tracks, one on each side of the tower. On the side of the tower with the skip hoist, the service track was farther away from the tower than the other side so that the locomotives could clear the hoist mechanism. The coal chute on that side of the tower was elongated to accommodate that longer distance. Both coaling chutes were located on the same end of the tower. When looking at the hoist side of the structure, the coal chutes were on the left. On the other side of the structure the coal chutes were on the right. At the other end of the sides from the chutes were pipes to provide dried sand to the locos. The Norry tower also had two recessed panels on each end of the structure. It was a poured concrete structure, which was constructed by building a wooden frame and then pouring the concrete into the form. When the form was removed the outline of the boards remained which is a distinctive characteristic of this structure.

The prototype in the 1970's after the end of steam. (Dom Walker photo.)

More 1970's images of the tower (clockwise from upper left): door and window end; opposite end; non-hoist side; hoist side detail; hoist side detail. (All photos, Tom Hayden.) Note that Pennsylvania Railroad Facilities in Color, Volume 7, Northern Division by Robert Yanosey has a photo of the Norry coaling station on July 10, 1955 on page 28.



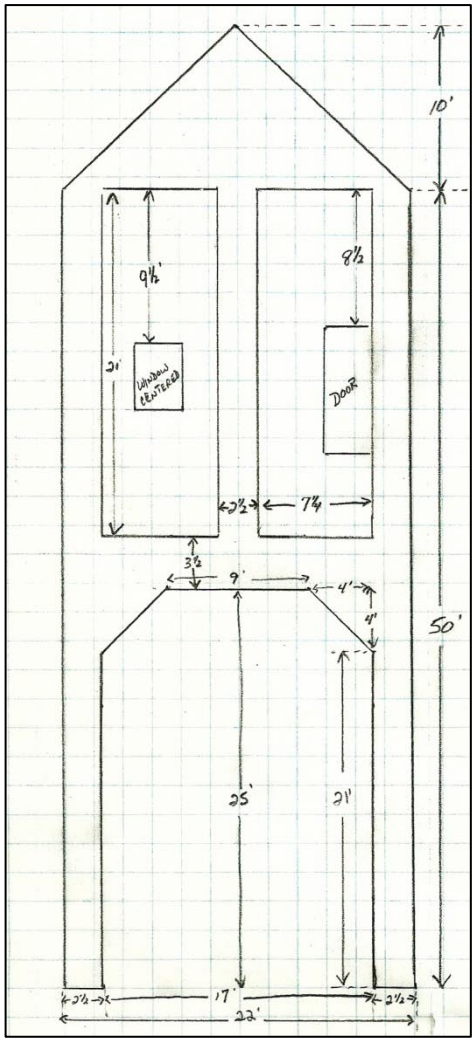


I model the Shamokin Branch in 1957, and, with eight I1 locomotives on the roster, I needed to have a functioning engine facility at Northumberland on my layout. There are no retail models that satisfied my layout design standards. My two main goals for my layout are to have an operating layout that can be enjoyed by my monthly regular crews and to have scenes on the layout that will represent what the Shamokin Branch looked like in the 1950s, including scratchbuilt or kitbashed structures when necessary.

Gathering information on the Norry concrete coaling tower was not as easy as I had thought. There are few photos of the tower, especially during the 1940's and 1950's, and there is not a lot of documentation that I could find on the web or in the literature. Fortunately, a number of friends were able to share information with me and some sent photos that I could use for this project. Thanks to Todd Sullivan, Tom Hayden, Steve Hoxie, Susan Yosten, Owen Thorne, Paul Noble, John Sutkus, and Dom Walker for the photos and the help and guidance they provided me in researching this project.

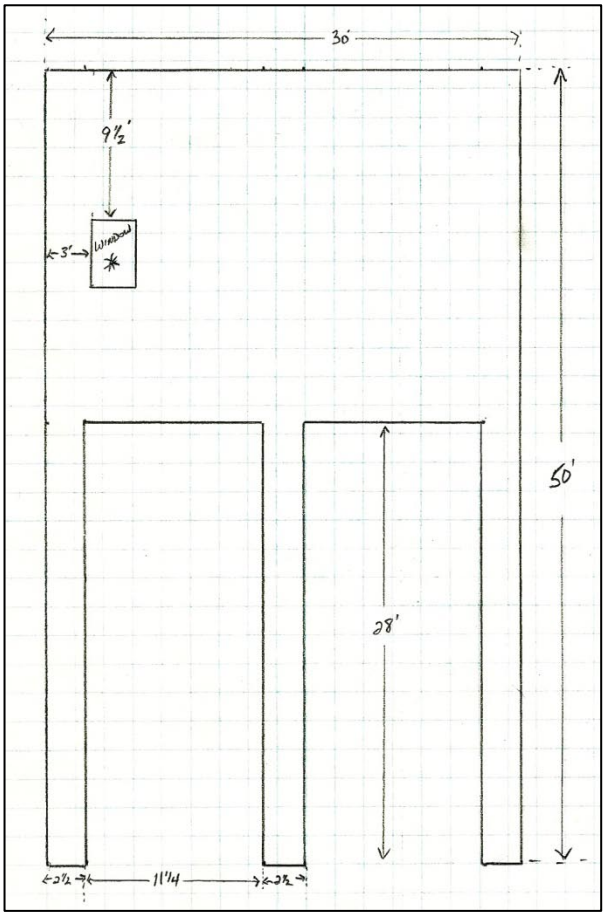
I could not find any diagrams of the tower and no one I talked to had the tower dimensions, however, I was able to make good use of the photos that were made available to me. The photos were used to estimate the dimensions by using known measurements, in this case a hopper car that was pictured sitting under the tower. Although my estimated measurements may not be exact, I feel that the model looks "right" and provides a good representation of the tower. The Renovo and Southport coaling towers could also be built using the methods described below.

The Norry tower scaled out at 22 ft. x 30 ft. footprint. The ends have an opening for the delivery track where loaded hopper cars dump their coal. This opening measures 17 ft. wide and 25 ft. high. There are six 30 in. square legs (three per side), the middle leg is centered at 15 ft. from each end. The legs on the hoist side are taller (28 ft.) than on the non-hoist side (21 ft.). The main portion of the tower measures 50 ft. high at the eaves of the roof, the roof peak is 10 ft. higher. There is a smaller structure on the top of the main structure, which I am calling the hoist house. This is where the skip hoist dumps the coal, and it measures 8 ft. wide, 10 ft. deep and 25 ft. high. It extends above the peak of the roof of the main structure. It is recessed in the main structure's roof and has a 6 ft. wide by 10 ft. tall opening on the hoist side to receive coal loads.

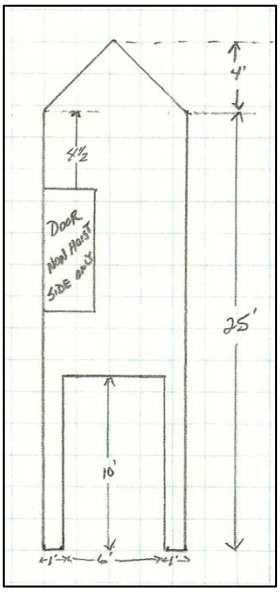


◀ *Drawing 1 – ends. The end with the stairs received Tichy window #8046 and Tichy door #8130. The opposite end has no windows or doors.*

▼ *Drawing 2 – sides. The hoist side has 25 ft. legs and no window. The opposite side has 21 ft. legs and Tichy window #8046.*



▼ *Drawing 3 – sides of hoist house. There is a 6 ft. x 10 ft. opening for the skip hoist on one side. The opposite side has a door and no skip hoist opening.*

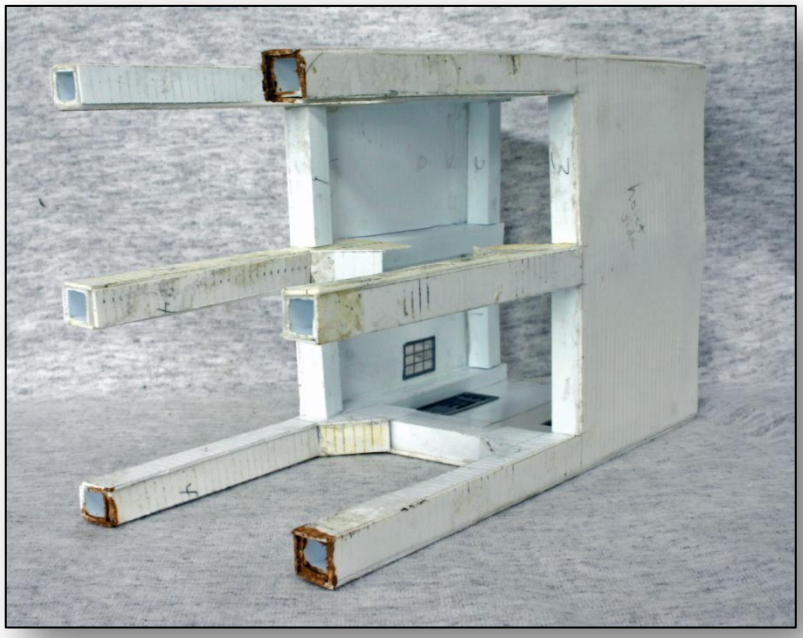


Main Structure

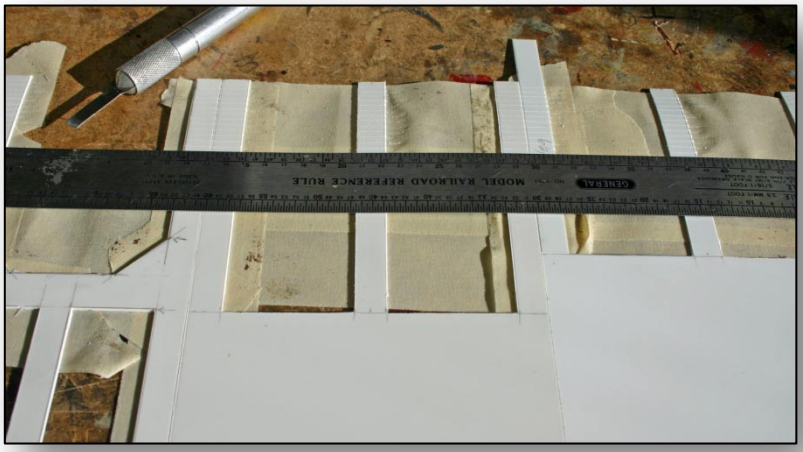
Drawings 1 and 2 (previous page) are provided of the various portions of the main structure to help with construction. Use Evergreen Scale Models (ESM) #255, 5/16 in. square tube as the main structural supports. Cut six to a length of 50 ft. for the legs. Then cut four to a length of 17 ft. for the ends and eight to a length of 11 ft. 3 in. for the sides, as the horizontal supports for the structure. Using solvent-type plastic cement, assemble the hoist side with two 11 ft. 3 in. horizontal supports even with the top of each leg and the other two at 28 ft. Assemble the non-hoist side the same way but with the lower horizontal supports at 21 ft. When the side supports are dry attach the two sides together using the end horizontal supports positioned at the top of each leg and the at 25 ft. Make sure the structure is square.

Use ESM #9040 0.040 in. sheet styrene for the outside of the structure. Cut a sheet of the styrene to size using the drawing. Then cut out the legs and recessed panels as well as any door or window openings (Tichy #8046, nine-pane masonry window and Tichy #8130, Residential door with transom). Also cut out sheet styrene for the four recessed panels. These must be slightly larger than the actual openings to allow for a gluing surface.

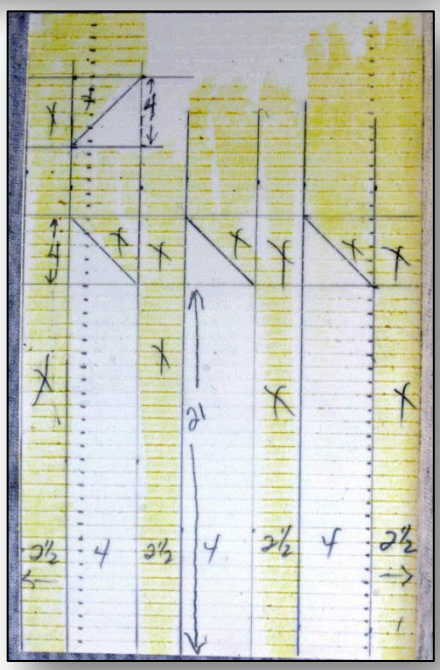
To simulate the poured concrete board lines, scribe each wall piece with a scalpel blade. I chose to make the lines 9 scale inches apart. This was chosen after trying to determine what size lumber the Pennsy would use. I tried counting the board marks from the photos and comparing that to the overall dimensions, then estimating the width. I also had to consider the ease of the modeling process. I decided on 9 scale inch boards and drew horizontal lines 9 in. apart and scribed the sheet styrene (see photo). When the four main structure sides are complete, glue them to the super structure trying to match the scribed lines at the corners.



▲ *Note 5/16 in. square tubing is used to frame the superstructure. Scribed siding is attached to the frame to simulate the surface of cast concrete.*



▲ *Scribing the .040 in. styrene sheet.*



► *Scribing the legs.*

Glue ESM #8608 (.066 in. x .090 in.) strip styrene around three of the inside edges of the two ends of the tower where openings for the recessed panels have been cut. These provide gluing surfaces for the recessed panels. The square tube leg will serve as the fourth side. Then glue the scribed recessed panels in place. All the other visible surfaces including the back and sides of the legs must now be covered with the scribed styrene (see photo). Lay out the measurements on a sheet of 0.040 in. sheet styrene (see photo) and scribe the lines then cut out the various pieces to size. Glue everything in place trying to match the scribed lines at each corner. Lightly sand the structure with fine grit sandpaper to remove the burrs from the scribing lines and to slightly round the corners.

It is difficult to see in many of the photos, but at the base of the tower between the legs is a concrete reinforcing wall. It appears to be flush with the legs on the delivery track side, inside of the tower, but it is not as wide as the legs. Use .080 in. sheet styrene cut so that it is 6 scale feet high and fits between the legs. I did not notice this detail until late in the construction process so the wall sections were installed after I had positioned the tower on the site. On my tower these reinforcing walls were not installed at the bottom of the legs but a bit higher to take into account that the legs were sitting in the holes that were drilled to level the tower (see site preparation below).

The main structure, hoist side.

A ¾ view of the door/window end and non-hoist side.

Using Plastruct #91630, HO Asphalt Shingle, build the pitched roof for the main structure. Cut the shingles sheet to size and use .04" sheet styrene to reinforce the roof and to maintain the correct pitch (see photo). Test fit the roof, but do not attach it at this time.

HOIST TOWER

Use the same .040 in. scribed sheet styrene to build the hoist house (see drawing 3). The hoist house side is 8 ft. wide and 25 ft. high to the eaves with a 6 ft. x 10 ft. opening cut into the bottom. Each end is 10 ft. wide x 25 ft. high and the non-hoist side is 8 ft. wide x 25 ft. high with a door opening. The peak of the roof is 4 ft. higher than the eaves. Reinforce the corners with strip styrene and glue together keeping the structure square. The roof is constructed and reinforced with the same materials as the main structure roof. Do not attach the roof at this time.

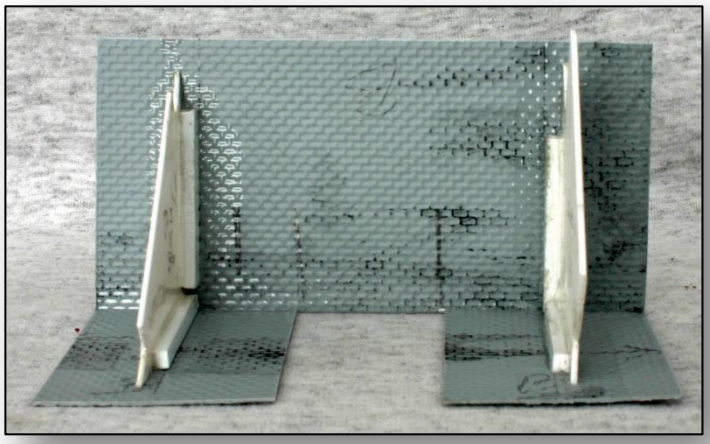
The hoist tower must be recessed into the main structure roof. The hoist side surface is even with the surface of the main structure and it extends inward to the roof peak. Take the main structure roof and remove an 8 ft. wide rectangle from the center of the hoist side so that the hoist tower will side into the slot. I had to do quite a bit of fitting to get it to fit properly. I also removed about 6 in. of the outside wall on the bottom of the hoist side of the hoist tower so that its wall and that of the main structure were flush (see shaded area on drawing 3).

At this point, I painted both reinforced roofs a flat black and both structures a concrete color. I used a mix of artist's acrylic paints, Neutral Gray, Parchment, Payne's Gray and Burnt Sienna. Use a mix of Neutral Gray and Parchment to obtain the aged concrete look. The Payne's Gray was used as a wash, diluted with water, to give the dark soot look and the Burnt Sienna will provide the rust color. Looking at the few photos taken in the late 1950's, the tower is very black with soot and smoke from all the steam power. Most of the photos that I have seen were taken well after the demise of steam and the tower has that old concrete look, almost a sandy color, with most of the black being washed off by the rain and snow. I heavily weathered my tower to reflect heavy use in 1957. When satisfied with the weathering, lightly sand the sides with fine grit sandpaper which will give it a less uniform look by taking some color from a few areas.

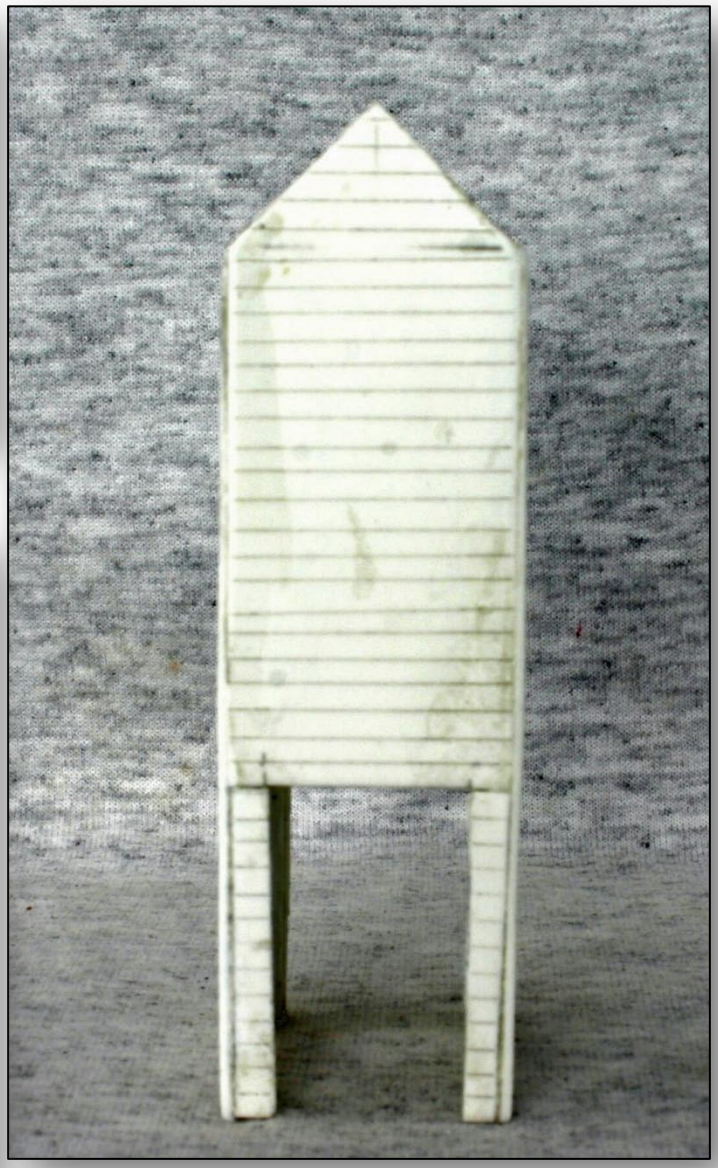
Before final assembly, paint and install the doors and windows and put "glass" behind the windows. Start the final assembly by gluing the roof to the main structure. Then fit the hoist house into the roof slot, and, making sure that everything is square, glue it in place. Leave the attachment of the hoist house roof until the final assembly.

PREPARE THE SITE

The tower has a delivery track running through it to supply coal. The delivery track is slightly elevated, higher than the two service tracks located on each side of the tower. To raise the coal delivery track, cut a strip of 1/8 in. Masonite® fiberboard 1½ in. wide and to a length that will satisfy your space requirements. I used a 3 in. strip for the entry under the tower and an 8 in. strip for the rest of the siding. Between the two strips I cut out a rectangular hole 1½ in. wide for the grate x 3 in. toward the hoist side of the tower. I cut all the way through my ½ in. Homasote® so that the pit is deep enough, about 5/8 in., to accommodate the skip hoist track and bucket. The Tichy coaling tower lift mechanism (Tichy #8008) will be attached to the outside of the Norry coaling tower (described in the next section) and will protrude about and inch from the hoist side of the tower. The pit must be large enough to accommodate the track and bucket of the lift mechanism.



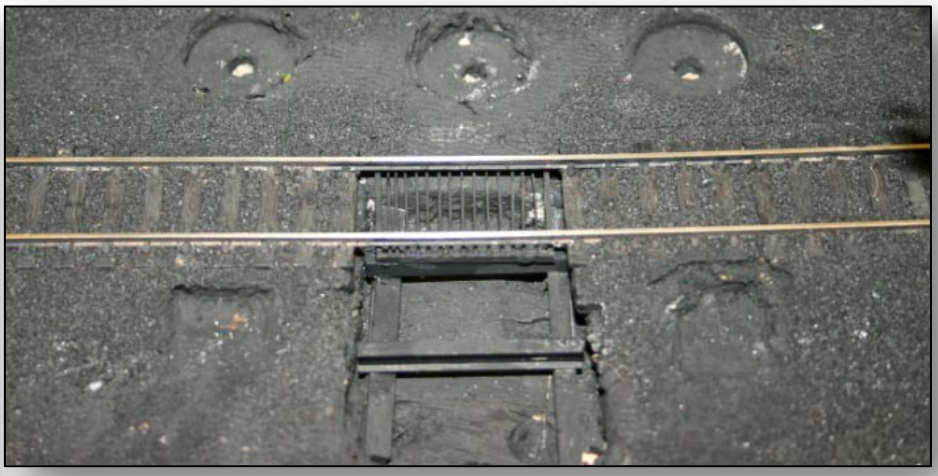
▲*Roof assembly for main structure.* ► *Hoist house.* ▼ *Hoist house recessed in the main structure roof.*



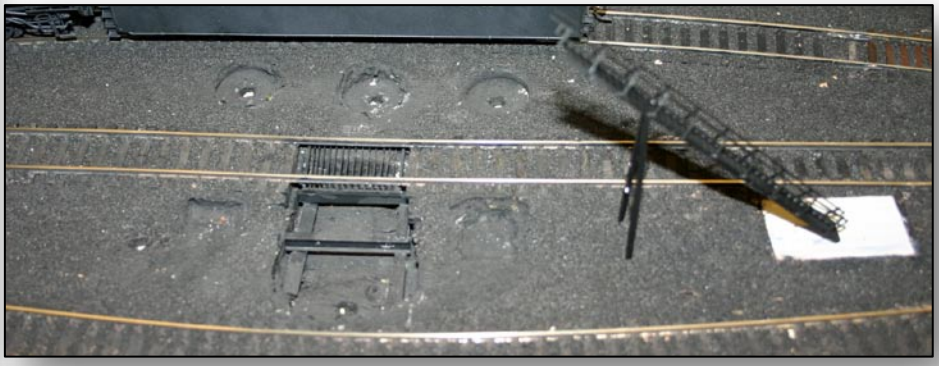
Drill six ¾ in. holes for the legs. That way you will be able to fine tune where the tower, delivery and service tracks will be located and later fill in the holes with your scenery goop and ground cover. Wait until the details are installed on the tower before you put in your service tracks.

I did not have any photos of the grate or coal pit, so I built a nice looking grate following a design that I copied from a Fine Scale Models kit, but I winged the rest. Unless the coaling tower will be right next to the edge of your layout it will be hard to see the pit. Scratchbuild the pit structure with I beams and the grate with strip styrene. Build a small concrete pad as a landing for the steps. The entire area was painted flat black.

In the prototype photos one can see a small concrete structure near where the stairway comes down to the ground. This is the power house for the coaling tower. I did not have room for this and did not model it.

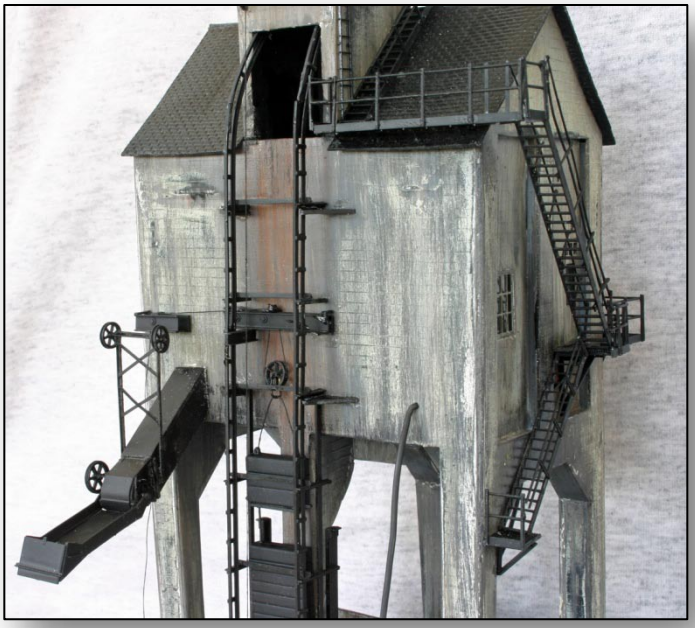


◄ *Another view of hoist house added to main structure.* ▲ *Site preparation – pit and grate.* ▼ *Site preparation, cement pad, and final stairway.*



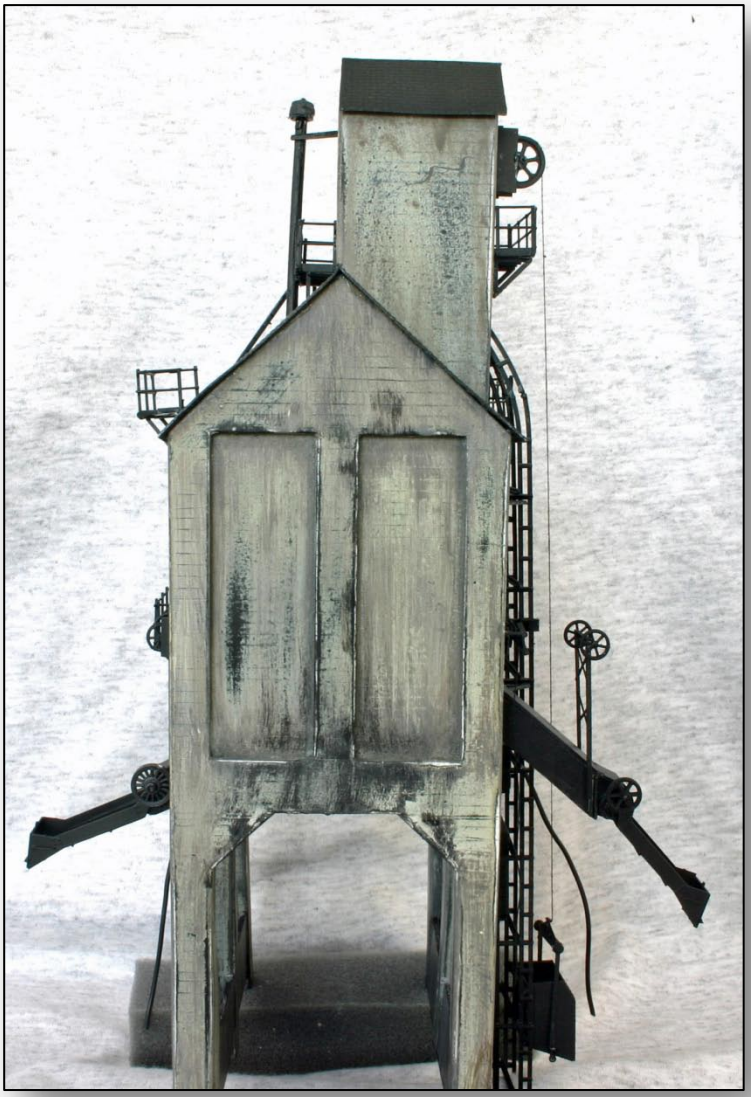
Details, non-hoist side.

Details, ¾ view door/window end and non-hoist side.



Details, hoist side.

Details, hoist side, bucket, and pit.



Details, plain end.

Details, ¾ view of plain end and non-hoist side.

DETAILING THE COALING TOWER

The next step is to detail the tower. Include as many detail parts as you think are appropriate for your tower. My coaling tower is about 2 feet from the edge of the layout so I chose to attach details such as the lift mechanism, main steps, railings, ladders, platforms, coal chutes, sanding hoses and pulley/sheave apparatus. I did not go to the extent of putting all of the cables on the tower or including some of the minor platforms and other hardware. Use the prototype photos as a reference.

Most of the detail parts can be purchased from Tichy. Many were part of Don's 400-ton Coaling Tower Kit #7010. Fortunately these parts can be purchase separately and instructions are available on the web site:

PARTS

Qty.	*Item.*	*Description*
Tichy Train Group		
2	#8001	open grate platform and handrails
5	#8002	safety cage ladder and staircase
2	#8003	coal chutes
1	#8008	coaling tower lift mechanism
1	#8060	fire escape platform
Grandt Line		
1	#5122	Cable Sheave, 43 in. diameter

All detail parts should be painted flat black while still on the sprues. Note: All of these detail parts are very delicate and will easily come unglued or break (I know from experience). Handle the tower carefully as you apply the detail parts. Detail the tower in the sequence that is described and you will have an easier time than I had. The hoist track extends below the legs so detail the hoist side of the tower last because you will not be able to stand the tower up on your work bench after the hoist lift mechanism is attached to the tower. I included many close-up construction photos of the details which I hope will help others with the detailing.

Start by detailing the end of the tower that has the door and window. Most of the detailing consists of stairways and ladders with connecting platforms. Follow the Tichy directions for assembly and the photos of the tower to get everything located properly. Leave the bottom course of steps until later for ease of handling. The opposite end of the tower has no details.

Detail the non-hoist side of the tower next. Again there are steps, platforms, and ladders as well as a coal chute to serve locomotives on that side of the tower. Use photos to apply the details.

For the hoist side of the tower, the lift mechanism was assembled as described in the Tichy instructions. It is very delicate. The hoist mechanism track should extend down into the coal pit below ground level. The top of the hoist track curves toward the building and should enter the opening in the hoist house to dump loads into the storage bins. The Tichy lift mechanism is too long, so remove about 3 in. from the curved upper section so that it can be correctly positioned. Cement the lift mechanism to the hoist side of the tower following the photos as a guide. Finish the lift mechanism by installing the counter weights and the bucket.

Since the lift mechanism is attached to the side of the tower, the coal chute on this side must extend farther away from the tower than on the non-hoist side. Build a rectangular tube extension from the side of the tower out of .060 in. sheet styrene and attach the Tichy coal chute to the extension. Make the extension long enough to reach the service track which must clear the hoist lift mechanism. I also built the supporting structure with two pulleys that extend above this coal chute, which caught my eye in the photos. Use appropriate size ESM strip styrene angles, and build the supporting structure. Attach the Tichy pulleys to the top. The large pulley at the top of the hoist house is the Grandt Line 43" cable sheave which was glued to two ESM strip styrene angles. I modeled the cable that extends from the hoist bucket to that large sheave and the cable that extends from the counter weights to some pulleys.

The tower is now ready to place on the prepared site. Be sure you have proper clearance for all of your locomotives. I had to move the hoist side service track away from the tower a bit to assure clearance for my I1 locomotives.

I only found one good photo from the 1950's of the sand lines that ran from the two sides of the tower. It shows a straight pipe that ran from the tower to a support post on the far side of the service track. It appears that a flexible hose was attached to the pipe and the workers could access that hose from the locomotive. Use 22 gauge solid wire for the sand lines. With a scalpel blade slice the insulation and expose the copper wire to simulate the solid pipe. Pull down the insulation, see photo, to simulate the flexible hose. Place a support angle into the ground and ACC the copper wire to it. Paint everything flat black.

Details, ¾ view of plain end and hoist side.

Above two photos show opposite ¾ views of hoist house.

Finished tower on the layout showing the plain end and hoist.

The finished model on the layout, hoist side.

Modeling an N-Scale Heavyweight-Era Blue Ribbon Train
Part 3: Plan 2413A 5-Compartment Sleeper Observation Cars

By Claus Schlund – Images by the author

▲ *The 5-compartment sleeper-observation* Parkesburg *awaiting assignment.*

Introduction

As with many other areas of its operation, the PRR marched to the beat of its own drum when it came to the assignment of sleeper-observation cars. In the early days of steel passenger cars, this often meant a Pullman Plan 2413 car provided this service. As built, these were 6-compartment observation type cars. These cars carried the end markers for the top trains of the PRR during this time. As an example, Pennsylvania Railroad's Broadway Limited by Welsh, on page 60, lists Plan 2413 car *Pitcairn* in the July 2, 1924 consist of the *Broadway Limited*.

In 1925, the Plan 2413 cars were displaced by the arrival of newer 4-compartment Plan 3960 cars in the *Hall* and *Circle* series. It appears this event prompted a modernization and rebuilding of many 6-compartment Plan 2413 cars to 5-compartment Plan 2413A. The first car was rebuilt on October 28, 1925, and the last rebuild occurred on October 26, 1926. More information regarding rebuilding of these cars can be found at http://www.pullmanproject.com/. Major internal changes included conversion of one of the compartments to a buffet area. Externally, the vestibule doors were plated over.

Plan 2413A Known Service Assignments

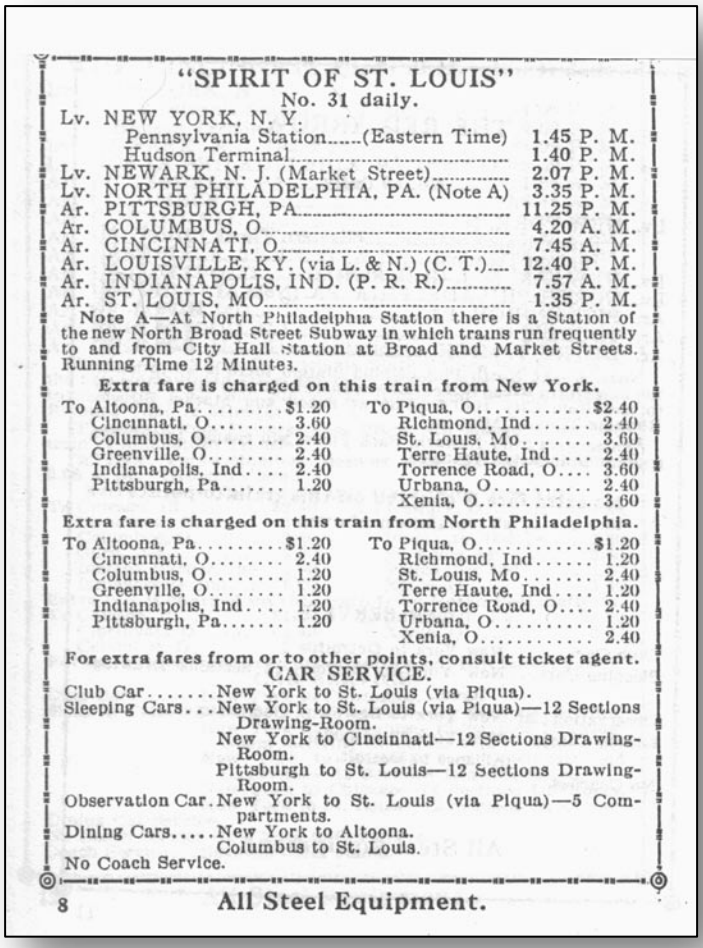
Information for the late 1920's and early 1930's indicates these cars served a variety of PRR trains.

1925-1926

- Pennsylvania Railroad's Broadway Limited by Welsh shows an unidentified Plan 2413A car immediately behind the locomotive tender on the *Liberty Limited*. Although undated, the photo had to be taken after the first car conversion to Plan 2413A was completed on October 28, 1925, and likely was taken prior to April 1926 when 4-compartment Plan 3960 *Circle* series cars specifically built for this train would have been in use.

1928

- Form 99 PRR Timetable effective September 30, 1928 indicates *The Metropolitan* and the *"Spirit of St. Louis"* each included an observation 5-compartment (Plan 2413A) car (information from Pennsylvania Railroad 1927-1932 A Pictorial Review by Gardner on pages 30-31).
- The Pennsylvania Railroad in Indiana by Watt has on page 110 a photo of a Plan 2413A car on the *"Spirit of St. Louis"* on April 16, 1928



"SPIRIT OF ST. LOUIS"
No. 31 daily.

Lv.	NEW YORK, N. Y.	
	Pennsylvania Station.....(Eastern Time)	1.45 P. M.
	Hudson Terminal.....	1.40 P. M.
Lv.	NEWARK, N. J. (Market Street).....	2.07 P. M.
Lv.	NORTH PHILADELPHIA, PA. (Note A)	3.35 P. M.
Ar.	PITTSBURGH, PA.....	11.25 P. M.
Ar.	COLUMBUS, O.....	4.20 A. M.
Ar.	CINCINNATI, O.....	7.45 A. M.
Ar.	LOUISVILLE, KY. (via L. & N.) (C. T.)....	12.40 P. M.
Ar.	INDIANAPOLIS, IND. (P. R. R.).....	7.57 A. M.
Ar.	ST. LOUIS, MO.....	1.35 P. M.

Note A—At North Philadelphia Station there is a Station of the new North Broad Street Subway in which trains run frequently to and from City Hall Station at Broad and Market Streets. Running Time 12 Minutes.

Extra fare is charged on this train from New York.

To Altoona, Pa.....	$1.20	To Piqua, O.....	$2.40
Cincinnati, O.....	3.60	Richmond, Ind.....	2.40
Columbus, O.....	2.40	St. Louis, Mo.....	3.60
Greenville, O.....	2.40	Terre Haute, Ind....	2.40
Indianapolis, Ind....	2.40	Torrence Road, O....	3.60
Pittsburgh, Pa.....	1.20	Urbana, O.....	2.40
		Xenia, O.....	3.60

Extra fare is charged on this train from North Philadelphia.

To Altoona, Pa.....	$1.20	To Piqua, O.....	$1.20
Cincinnati, O.....	2.40	Richmond, Ind.....	1.20
Columbus, O.....	1.20	St. Louis, Mo.....	2.40
Greenville, O.....	1.20	Terre Haute, Ind....	1.20
Indianapolis, Ind....	1.20	Torrence Road, O....	2.40
Pittsburgh, Pa.....	1.20	Urbana, O.....	1.20
		Xenia, O.....	2.40

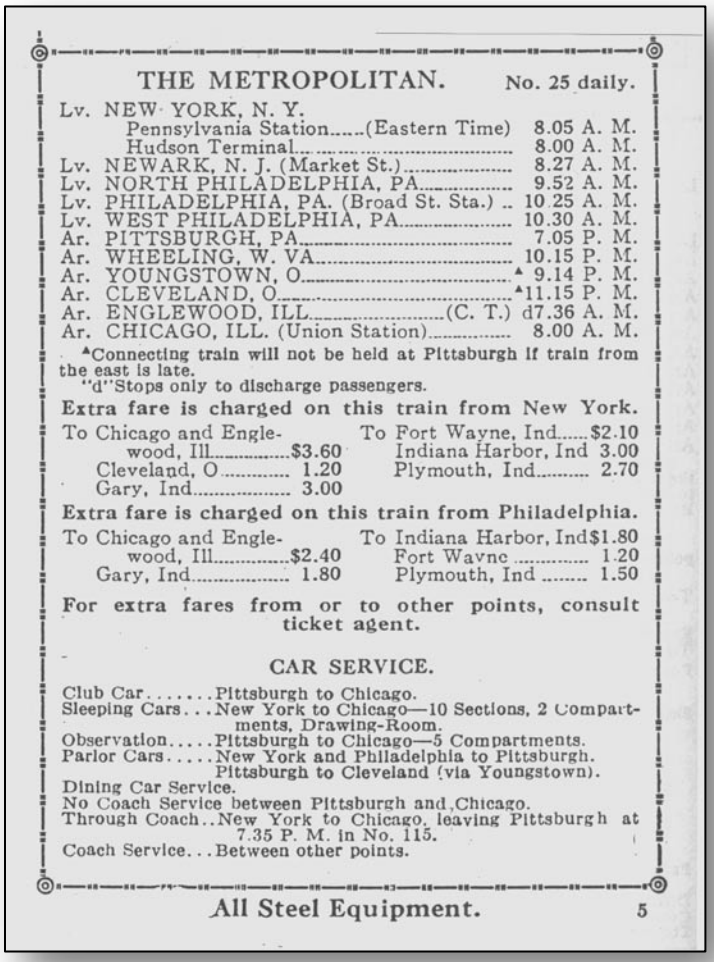
For extra fares from or to other points, consult ticket agent.

CAR SERVICE.

Club Car.....	New York to St. Louis (via Piqua).
Sleeping Cars...	New York to St. Louis (via Piqua)—12 Sections Drawing-Room.
	New York to Cincinnati—12 Sections Drawing-Room.
	Pittsburgh to St. Louis—12 Sections Drawing-Room.
Observation Car.	New York to St. Louis (via Piqua)—5 Compartments.
Dining Cars.....	New York to Altoona.
	Columbus to St. Louis.
No Coach Service.	

8 All Steel Equipment.

▲ *The* "Spirit of St. Louis" *of 1928.*



THE METROPOLITAN. No. 25 daily.

Lv. NEW YORK, N. Y.		
Pennsylvania Station.....(Eastern Time)		8.05 A. M.
Hudson Terminal		8.00 A. M.
Lv. NEWARK, N. J. (Market St.)		8.27 A. M.
Lv. NORTH PHILADELPHIA, PA		9.52 A. M.
Lv. PHILADELPHIA, PA. (Broad St. Sta.)		10.25 A. M.
Lv. WEST PHILADELPHIA, PA		10.30 A. M.
Ar. PITTSBURGH, PA		7.05 P. M.
Ar. WHEELING, W. VA		10.15 P. M.
Ar. YOUNGSTOWN, O		▲ 9.14 P. M.
Ar. CLEVELAND, O		▲11.15 P. M.
Ar. ENGLEWOOD, ILL.....(C. T.)		d7.36 A. M.
Ar. CHICAGO, ILL. (Union Station)		8.00 A. M.

▲Connecting train will not be held at Pittsburgh if train from the east is late.
"d" Stops only to discharge passengers.

Extra fare is charged on this train from New York.

To Chicago and Englewood, Ill	$3.60	To Fort Wayne, Ind	$2.10
Cleveland, O	1.20	Indiana Harbor, Ind	3.00
Gary, Ind	3.00	Plymouth, Ind	2.70

Extra fare is charged on this train from Philadelphia.

To Chicago and Englewood, Ill	$2.40	To Indiana Harbor, Ind	$1.80
Gary, Ind	1.80	Fort Wayne	1.20
		Plymouth, Ind	1.50

For extra fares from or to other points, consult ticket agent.

CAR SERVICE.

Club Car.....Pittsburgh to Chicago.
Sleeping Cars...New York to Chicago—10 Sections, 2 Compartments, Drawing-Room.
Observation.....Pittsburgh to Chicago—5 Compartments.
Parlor Cars.....New York and Philadelphia to Pittsburgh.
Pittsburgh to Cleveland (via Youngstown).
Dining Car Service.
No Coach Service between Pittsburgh and Chicago.
Through Coach..New York to Chicago, leaving Pittsburgh at 7.35 P. M. in No. 115.
Coach Service...Between other points.

All Steel Equipment. 5

▲The Metropolitan *of 1928.*

1929

- The document http://prr.railfan.net/passenger/MakeUpOfTrains_ER_NYZone_1929.pdf lists 5-compartment Observation-Sleeper (Plan 2413A) cars in the following consists: *Pennsylvania Limited, Metropolitan Express, "Spirit of St. Louis", The Clevelander, Buckeye Limited,* and *Gotham Express.*
- Pullman Car Catalog by Kratville indicates on page 78 that Plan 2413A cars were in use on the *Red Arrow* in 1929. Furthermore, The Complete Roster of Heavyweight Pullman Cars by Wayner indicates on page 76 that cars *Chaumont* and *Corbett* were renamed in September 1929 to *Detroit* and *Red Arrow* respectively, presumably for this service.

1930

- The Pennsylvania Railroad in Cincinnati by Tipton and Blardone on page 132 lists a Plan 2413A car in the consist of the *Cincinnati Limited* for April 27, 1930.

1931

- PRR *Condensed Time Tables Between St Louis, Louisville, Indianapolis, and the East,* effective April 26, 1931, indicated *The Commercial Express, The Gotham Limited*, and the *Red Arrow* included an Observation 5-compartment (Plan 2413A) car (See Pennsylvania Railroad 1927-1932 A Pictorial Review by Gardner on page 98).

Final Disposition

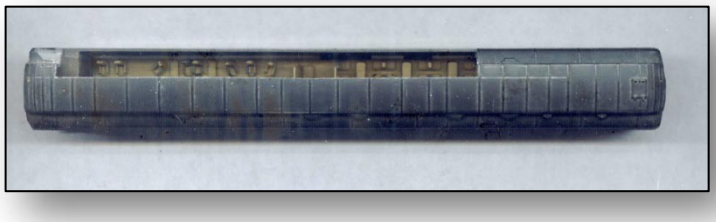
Since the Plan 2413A cars were never air conditioned, it is unlikely they saw much regular use after the early 1930's. Nearly all of the Plan 2413A cars lasted until 1942, at which point all remaining cars were scrapped.

Let's Get Started

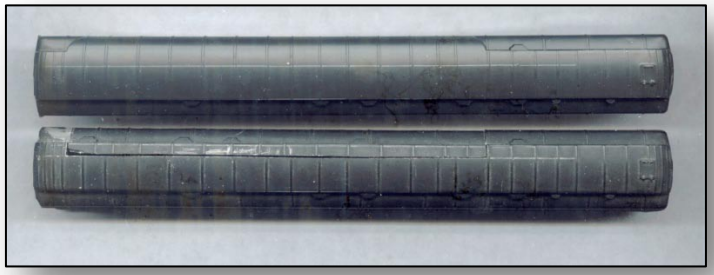
▲ These cars had long been on my "to do" list, but I was stymied by a lack of reasonable starting points. Finally one day I discovered a method where two Atlas/Rivarossi heavyweight observation cars – one serving as the base car and another as a parts donor – could provide the needed parts.

The Roof

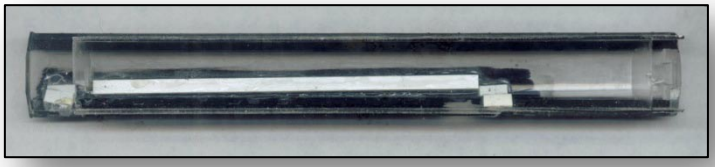
▲ The Plan 2413A cars never received air conditioning, so we will need to cut the base car roof to remove the portion of side section with the air conditioning duct fairing, and cut another side section without the air conditioning duct fairing from the roof of the donor car. Start by marking a pencil line into the two roofs at the same offset but on opposite sides.



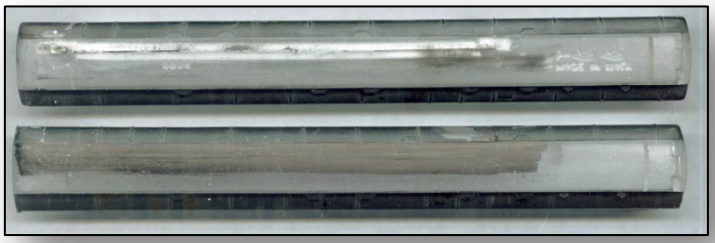
▲ The base car roof with the air conditioning duct fairing removed



▲ Graft the replacement roof side section without air conditioning duct fairing into the void. Looks terrible, doesn't it? Don't worry. It gets better! A factory roof is shown alongside for comparison.



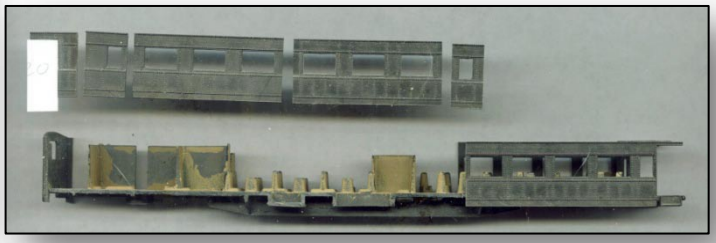
▲ Reinforce the joints with styrene splice plates glued to the interior surface.



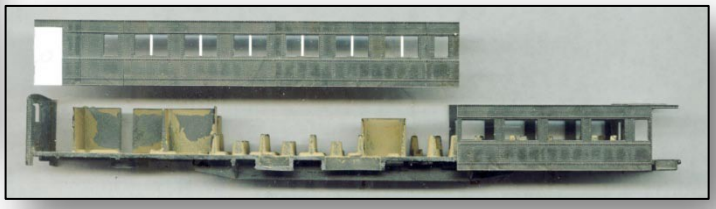
▲ Allow a day or two for the glue to fully cure, then fill any remaining voids with styrene scraps glued into place. Again, allow the glue to fully cure, then file the top of the clerestory roof flat removing the seam detail. Apply filler putty across the entire seam surface, and sand the upper roof clerestory surface to a smooth finish. Using a black magic marker to color the entire seam surface a uniform color helps when trying to access how smooth a surface finish you have achieved. You can see this illustrated on the lower of the two roofs shown. I found I got the best final surface finish by applying liquid ACC as a filler across the entire seam, allowing it to solidify thoroughly, and finishing with a fine file and 500 grit sandpaper.

▲ After painting, the roof looks pretty good. Can you spot the seam? It only shows under very careful inspection, and then only if you know to look for it.

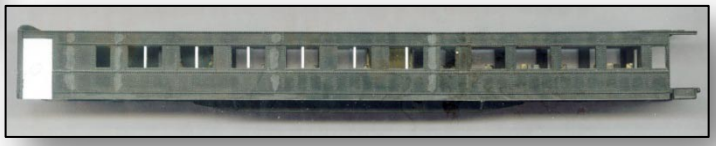
The Carbody



▲ On the base car, remove all separate parts from the car body, then remove the underbody detail with a razor saw. We will be keeping four large windows of the observation lounge portion of the car. Use a razor saw to remove the remainder of the car side. You will need to saw through the car floor. Try to guide the saw blade as close to the sides as possible without damaging the sides. We will re-use the existing underframe, so keep the car end and corner post intact. Make a new side section with the required window arrangement. As you can see this requires a total of five pieces, some of which you will obtain from the donor car. Add the plated-over vestibule door area made from 0.020 in. styrene. Keep in mind the new side section total length needs to be a tad longer than length of the void in the car side. It is essential that you cut and file all pieces to have perfectly square corners. A small modeler's square helps with this. In this image, the vestibule door area has not yet been filed to its final form.

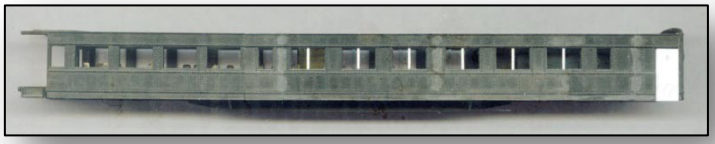


▲ Join the five pieces together, making sure the top edge forms an unwavering straight line. This is essential to avoid highly visible gaps at the roofline. Smooth any defects in the joints as required. Sand the joints as needed to make them as clean and smooth as possible. Next, file and sand the car side section to be an exact fit for the opening in the carbody created earlier. Work slowly and carefully to get the best fit possible. Time invested here yields its rewards in the next step. The mental breakthrough that made this whole kitbash work occurred when I realized the addition of 0.020 in. square vertical posts into the observation-sized windows would create a well-proportioned window pair with a total of six evenly spaced window pairs serving the five compartments and the buffet area of the car.

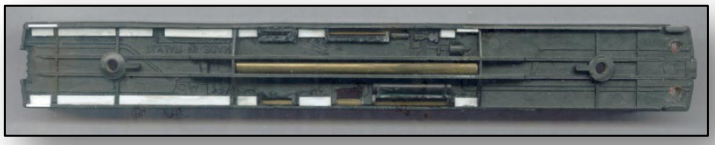


▲ Tack the new car side sections in place with styrene cement, do a final check for correct alignment, and allow the cement to set thoroughly. There is often a point when a modeling project

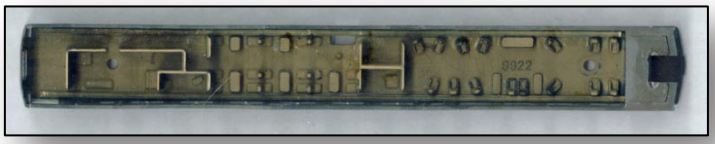
goes from a set of abstract and seemingly unconnected parts to something that resembles a unified whole, and that moment occurs here – it is always very rewarding!



▲ Once you have done one side, the other is a piece of cake, since it has the same arrangement of windows, just as a mirror image



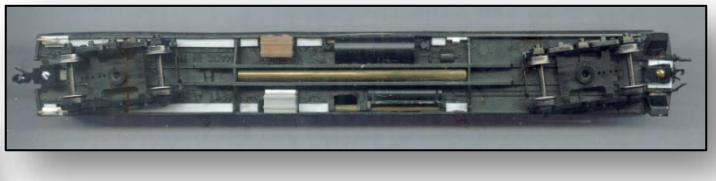
▲ The sawing we did earlier to remove the sides leaves the underframe a bit too narrow, so reinforce the side-to-underframe joint with styrene strips glued to the underframe bottom surface. Glue a length of 1/8 in. dia. brass rod into the bottom hollow area of the car center sill. This adds about 3.5 grams weight in an entirely invisible manner.



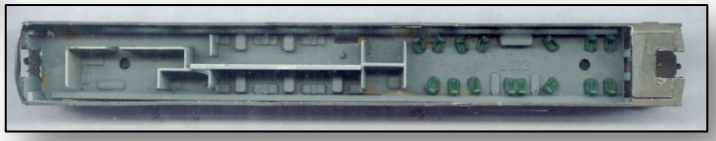
▲ Glue two sections of 1/16 in. square brass bar stock (K&S Engineering 370-15049) to the interior floor to help reinforce the side-to-underframe joint from inside and also add some invisible extra weight.

Detailing and Painting

▲ After the glue is solidly set (at least one day), temporarily set the roof into place and do any final finish sanding of joint areas. Install Wheels of Time #999010 trucks using the supplied Wheels of Time bolster pins. Remove the factory molded observation platform steps. Install underbody detailing as desired. I added a water tank made from 0.250 in. plastic rod, a pair of utility boxes cut from scrapped Bachmann passenger cars, and a steam trap made from a straight pin. Add etched-brass stirrups (Gold Medal Models 160-44 part 2) at the plated over vestibule ends. On the car observation end, add steps under the observation platform. I cut mine from a High Speed caboose underframe. Add air and steam hoses from a Pecos River Brass car to the observation end.



▲ File the area under the observation platform flat, and glue a 0.040 in. styrene coupler mounting pad under observation platform. The coupler on the observation end is a very visible item, so I elected to install a Z scale MT905 coupler. This coupler is close to scale size, but still operates with standard MT couplers. Glue a 0.050 in. styrene coupler mounting pad under the vestibule end of the car and install an MT1015 coupler. Position the coupler to allow the required space for an American Limited #8400 heavyweight diaphragm.



▲ I am generally a minimalist when it comes to passenger car interiors, so I kept things simple. Clip off any visible seat backs in the car interior compartment area, but leave the seats in the observation lounge area. Glue in a styrene corridor wall to serve as a view block in the compartment portion of the car. Brush paint the car interior a neutral color. Paint the seats in the observation lounge a contrasting color as desired.

Paint the roof Floquil Weathered Black. Mask the car interior and window openings with tape and paint the car exterior your favorite mix of Tuscan Red. Frost the car bathroom windows by sanding the interior of the window glass with medium sandpaper. Glue a brass protection railing of 0.010 in. dia. phosphor-bronze wire (Tichy Train Group #1101) on the inside of the window glass on the aisle side of the car. Install window shades in the compartment area of the car by painting some 0.015 in. x 0.188 in. styrene strip stock with Floquil Mud, cutting this into strips of appropriate size, and gluing them onto the interior of the window glass.

Paint the car with Testors GlossCote. Use lettering from Microscale 60-1141 and 60-1143 decal sheets. While none of the car names are correct as-is on the sheets, several car names require only two or three segments taken from sheet 60-1143: BEN-NING, BEN-TL-EY, HORN-ING-FORD, NE-OD-AK, OD-ENT-ON, and PARK-ES-BURG. Once the decals are thoroughly dry, give the car a finish coat with a mix made of 1 part Testors Dullcote and 2 parts Testors GlossCote.

Trim the factory observation railings from the platform, and paint the observation platform floor Floquil Engine Black. Paint the observation platform canvas awning Floquil Coach Green. Install etched brass observation platform handrails (Gold Medal Models 160-44 part 4). Install an American Limited #8400 heavyweight diaphragm on the vestibule end. Brush paint the observation stairwell tread surfaces, the air hose, and the steam hose with Testors Rubber. Install some passengers in observation lounge interior and/or observation platform.

The car is ready for service.

REFERENCE MATERIAL

- Pennsylvania Railroad's Broadway Limited by Welsh, on page 135, shows a diagonal view in-service picture of Plan 2413A car *Colonel Lindbergh* carrying the drumhead for the *"Spirit of St. Louis"*. This photo appears to have been taken at Sunnyside Yard in the third-rail era prior to the Great Electrification of the 1930's. Page 118 shows an in-service picture of an unidentified Plan 2413A car immediately behind the locomotive tender on the *Liberty Limited*. Conveniently between these two images we can see what both sides of this car type looked like. Both pages of this book are viewable online at http://books.google.com/books?id=HVPQTanDDAkC&pg=PA132&dq=broadway+limited+colonel+lindbergh&cd=1#v=onepage&q=broadway%20limited%20colonel%20lindbergh&f=true
- Page 387 of Pennsy Power 3 by Stauffer has the same diagonal view in-service picture of car *Colonel Lindbergh* (caution: the caption that accompanies this photo is incorrect in several ways).
- A broadside photo and a complete list of Plan 2413A cars appears in Pullman Car Catalog by Kratville on page 76. The same broadside photo also appears in Steam, Steel, and Limiteds by Kratville on page 199.
- Page 110 of The Pennsylvania Railroad in Indiana by Watt has a (somewhat unclear) in-service photo of a Plan 2413A car on the *"Spirit of St. Louis"* on April 16, 1928.

While I could not locate any drawings for the Plan 2413A cars per se, drawings showing modifications to Plan 2413 cars are available. I referred to these from time to time for dimensional data.

- Plan 2413 drawing compartment observation car modified from plan 2413 http://collections.carli.illinois.edu/cdm4/item_viewer.php?CISOROOT=/nby_pullman&CISOPTR=570&DMSCALE=100&DMWIDTH=2000&DMHEIGHT=600&DMMODE=viewer&DMTEXT=%202413&REC=2&DMTHUMB=1&DMROTATE=0
- Plan 2413 drawing with modification to compartment car http://collections.carli.illinois.edu/cdm4/item_viewer.php?CISOROOT=/nby_pullman&CISOPTR=607&DMSCALE=100&DMWIDTH=2000&DMHEIGHT=600&DMX=0&DMY=0&DMMODE=viewer&DMTEXT=%202413&REC=1&DMTHUMB=1&DMROTATE=0
- Plan 2413 drawing with modification to compartment sleeping car http://collections.carli.illinois.edu/cdm4/item_viewer.php?CISOROOT=%2Fnby_pullman&CISOPTR=560&DMSCALE=100.00000&DMWIDTH=2000&DMHEIGHT=600&DMMODE=viewer&DMFULL=0&DMOLDSCALE=14.69148&DMX=0&DMY=0&DMTEXT=%25202413&DMTHUMB=1&REC=3&DMROTATE=0&x=133&y=17
- The Pullman Project has construction and some service information on these cars online at http://www.pullmanproject.com/

Along the Line – PRR Model Photos

▲ A pre-war PRR K4s 4-6-2 Pacific speeds along as the sun rises. (Bill Neale photo) ▼ Two I1SA 2-10-0 Decapods on a coal train. (Chuck Cover photo. Following page, top: An I1SA switches coal in Weirton, W. Va. Bottom: Train PH11 rolls through "BURGETTS" interlocking in Weirton, behind a mighty N1s 2-10-2 Santa Fe.


PENNSYLVANIA


PENNSYLVANIA
1361