



Chicago & North Western Historical Society MODELER

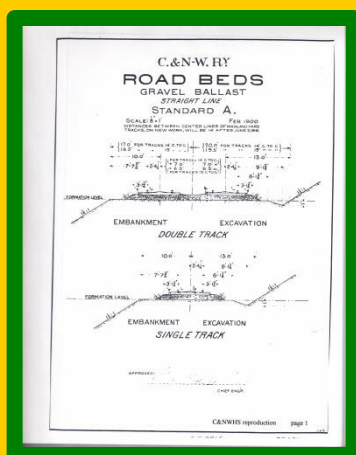
Volume 12, Number 3

January 2021



Early C&NW Piggybacks

Flambeau Faux Bilevels



Modeling from the Archives

...and more

Bill of Lading

January, 2021

Masthead

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An Invitation to join the CNW Historical Society

The CNWHS is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the C&NW and related roads. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the CNW. Currently the Society has close to 3000 registered members. Members regularly receive a variety of information including a quarterly publication: NWL.

North Western Lines (NWL) is dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original CNW source material. This publication makes 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 CNW with a legitimate, respected voice in the railroad and historical communities. By working together, individuals interested in CNW 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 CNW and affiliated railroads.

The Archives Committee of the C&NWS is very active and maintains a large collection of the C&NW and related roads. For more information see the CNWHS web site.

Merchandise related to the C&NW, as well as back issues of NWL, Car kits and structure kits for modeling are offered through the CNWHS web site.

Chicago and North Western Historical Society Modeler is a publication of the CNW Historical Society (CNWHS) for the purpose of disseminating CNW modeling information.

An Illinois not-for-profit Corporation dedicated to preserving the legacy of the C&NW and its predecessor & successor roads since 1973.

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Apologies if I have inadvertently omitted anyone. Any person left out is entirely the fault of the editor.

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TOO MUCH OF A GOOD THING?

by Michael Mornard

“Can one desire too much of a good thing?” – Shakespeare, “As You Like It,” Act 4, Scene 1.

I don't have too much of a good thing, but I sure do have a lot of a good thing! I am in a position most editors would love to be in – assuming I want to keep all the issues of NW Lines Modeler about the same size, I actually have more articles available than would fit in one issue!

This is every editor's dream, I think. And it's doubly so for me, because all the articles are such high quality. This means that the ones I did not use this issue, I will simply use next issue, which will be a great help in getting me back onto the quarterly schedule I want to hold myself to. Theoretically. Honest. Hey, stop laughing!

I have asked, and you have given. I have wanted to see what our members are up to, and you folks have responded abundantly. I'm gratified by the response; it's the best kind of support I could get. When I receive a good article, it tells me that the membership cares about NW Lines Modeler and wants to keep it going.

And they are all extremely good articles. I am amazed at the talent and skill of our membership. Every article I receive is a delight to read, even if it's a subject I don't personally have much interest in. With all my heart, I thank our readers and contributors.

Special thanks also to Ron Christensen. Ron has been absolutely invaluable in helping me to set up a network of potential contributors, and keeps his ear to the ground on what's going on out there, which he very obligingly feeds to me! Ron may not be the NW Lines Modeler editor any more, but I would have stalled on the grade long before this without him.

But as they say on TV, “keep those cards and letters coming.” I need your help, your support, and, most importantly, your articles. The next issue is looking pretty solid, but then comes July and October and...

And as always, I'd like to hear what interests you, what doesn't interest you, feedback, suggestions, catcalls, whatever. The more information I have, the more I can make NW Lines Modeler the magazine the membership wants.

Please submit all materials in Microsoft Word, .doc or docx format, to michael.mornard@pobox.com. Photos may be included, or attach them in a separate Email and mark the article for where you want the photos – “Photo 1 here,” etc. A docx document is usually able to include the photos in the article because they are more compact than doc format documents.

Thanks.
Michael Mornard

MODELING THE FIRST-GENERATION PIGGYBACKS

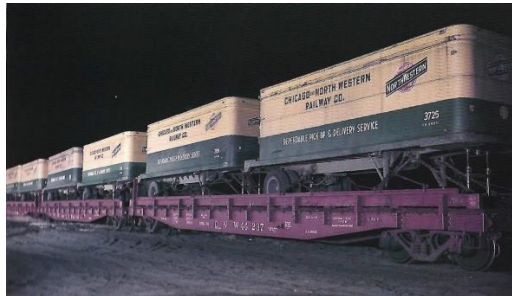
BY Kenneth Bohl

Note: Because *C&NW Modeler* is online, if you want more detail of any photograph, you can right-click it and select "Save as Picture", and then open the picture you've captured in Photo Viewer, PaintShop, etc. and zoom in to see more of the detail.

I'm starting this article with a disclaimer. I began doing this project, and just as I was completing it I stumbled on a series of 6 articles by Lloyd Keyser in a magazine called *Mainline Modeler*, October 1988 - March 1989 (I only found the 5th installment.), in which he created a much more detailed model than I did. If you feel you have the skill level and you can locate the magazines (Some are available on EBay.), go for it.

(Editor's Note: The entire archive of all issues of *Mainline Modeler* is available on DVD from the Chesapeake and Ohio Historical Society. See https://chessieshop.com/index.php?main_page=product_info&cPath=74_121&products_id=3291)

The Chicago & North Western was an innovator in the evolution of trailers & containers on flat cars. Around 1950, they introduced the first fleet of trailers and flat cars (along with dedicated tractor trucks). At first they used existing flat cars. The original loading/unloading process was quite cumbersome: Trailers had to be backed onto a string of flat cars circus train style. In order to do this, they added bridge plates to the car ends, and rub rails anchored in the stake pockets to guide the trailer wheels. The trailers were secured in place with chains, a process that took 60 man-minutes to load two trailers. These 50s-era TOFC's looked quite different from their more modern successors, and their presence in a model freight train can add a point of interest.



from *C&NW Official Color Photography*

There's an interesting video: <https://www.youtube.com/watch?v=Qq7OT03Yz6A>

Start watching at 7:20 and see what a cumbersome process the loading was in 1950 compared to today's containers. Another resource to consider if you want to get really detailed is the Kalmbach book *Piggyback and Containers: A History of Rail Intermodal*, available from Amazon or EBay.

First let's make a list of the things you'll want to buy.

1. flat car & trailers

- If you don't have either the flat car or the trailers, you may want to start with the Athearn 50' flat car with two 25' trailers. Actually, if you don't want to get really detailed about this car, the Athearn car is a reasonable representation of the early piggybacks and you can use it as-is.

- If you already have Athearn trailers and just need a flat car, you'll save both money and effort if you just get the Athearn 50' flat car.



2. stakes to fit in the pockets on the car Check first, it may already include stakes. But if you need to buy them, Athearn stakes are available to fit into the pockets. I bought them from Horizon Hobbies as "ATH13504".
3. basswood strips $\frac{1}{8}$ " x $\frac{3}{32}$ " for the wood beams (known as "rub rails") along the sides. Also $\frac{1}{16}$ " x $\frac{3}{32}$ " to use as a scale 6" spacer between the rub rail and the car deck
4. a length of very small rail - code 55 (which goes on top of the rub rails)
5. black chain - By eyeballing, I came up with a size of 30 links per inch (which are scale 3" links). I found it on EBay. You need about 12" of chain per trailer or 2' per flat car.

Let's start with the modification of the trailers. Here are pictures showing both front and back:



from C&NW Official Color Photography



from Kalmbach *Piggyback and Containers: A History of Rail Intermodal*

Note the following three differences between the Athearn trailer and the 1950s trailer:

- The 1950s trailer had only one rear axle.
- The body of the 1950s trailer was shorter than the Athearn trailer, and there was an open platform on the back.
- The lettering was different.

For the first two modifications, we first disassemble the trailers. The black undercarriages should slide out from the bottoms of the bodies. Let's start with the body. I do not have a blueprint to know exactly what length the bodies should be reduced to, but by eyeballing I ended up making them $2\frac{3}{4}$ " long (scale 20'). There's no easy way to do this - You have to saw the body in half, shorten one half, glue the two halves together, and use several coats of body contour putty & sand in between to hide

the seam. Using a razor knife, cut off the rear bumper (that rectangular frame that hopefully prevents you from getting decapitated if you rear-end a trailer) because the body will rest on the open platform. Save it for use later. Plus, notch a little bit off the bottom of the back of the body, because it rests on the deck of the undercarriage, but the sides hang down to its underside. Here is a picture with the before-and-after:



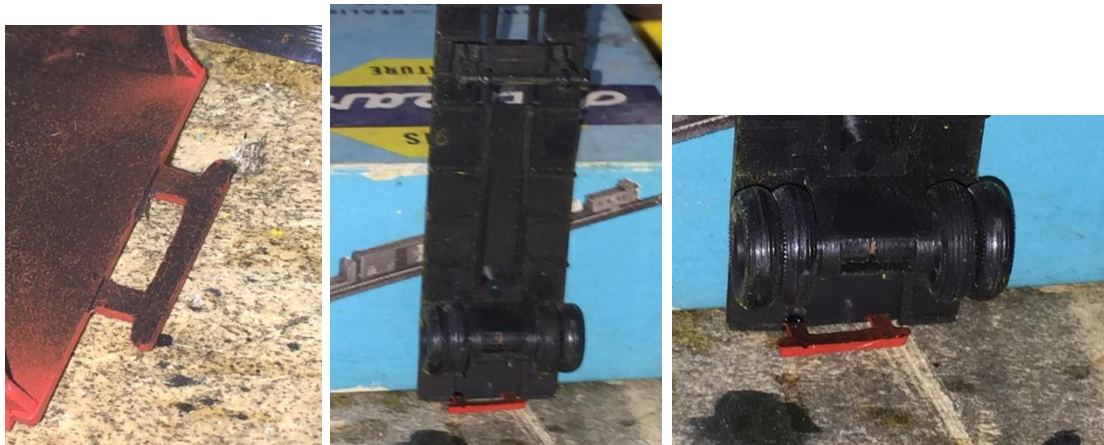
In this picture, on the inside you can see the seam between the two halves.



For the black undercarriages, first saw off the rear axle. File everything in that area down to flat. The floor has raised sides which you'll have to file down at the back end until the undercarriage will fit into the body. Here is a picture with the before-and-after:



One other detail of the undercarriages is that when you cut the rear bumpers off the trailer bodies, you can later glue them to the backs of the undercarriage platforms. Make sure the two vertical parts are the same length, so the bumper ends up straight. Stand the undercarriage on end on a non-stick surface and glue the bumper to it. Be careful to make sure it's centered.



That having been said, if you have a bumper that ends up crooked or off-center, just make that one the front trailer on the flat car. With another trailer behind it, you'll barely see that bumper.

The last step in modifying the trailer is the painting & lettering of the bodies. The painting is pretty straight-forward. First paint them yellow. Then, my eyeball proportion of yellow paint to green had me applying masking tape 19/32" below the trailer roof to spray on the green.

The lettering took me quite some time. But we have today at our disposal companies that will print decals from a file you submit. I went through all the fonts in Microsoft Word and picked the one that most resembled the trailer lettering. As usual, I had to eyeball the proportions of the trailer body to come up with the correct font size. The herald on the trailers is proportioned differently than the usual C&NW herald (the bar is narrower), so the best I could do was to scan it from a picture. Rather than have you duplicate all of this effort, you can purchase the decal set at <https://switchlinedecals.com/chicago-north-western-dependable-pick-up-delivery-service-piggyback-truck-and-trailer-decal-set/>

Note, in the 4th picture - the black & white one - There is a black number on the door(s) on the back of the trailer. In this picture, one number is in the middle and one is in the upper-right-hand corner. Take your choice.

The decal set comes with good application instructions. It is important to then spray the trailer body with clear flat.

A final step is to put a chain across the back doors. See the 4th picture - the black & white one.

Now let's turn our attention to the flat car. Refer to the picture at the beginning of this article. We're going to create our own sides and deck plates, so if you started with the flat car that has trailers remove the black plastic decks from the deck of the Athearn car. It should just unsnap. Use a contour putty to fill the four slotted holes the decks snapped into.

Install the stakes. Note that you don't put one in every pocket. In the picture, there are 9 stakes on each side. The Athearn stakes are longer than you want them for this application. Given the width of the rub rail beam ($\frac{1}{8}$ "), the spacing you want it above the deck ($\frac{1}{16}$ "), and the depth the stake goes into the pocket, cut the stakes to $\frac{1}{4}$ " (which means you can get two out of each Athearn stake). Glue the stakes into the pockets.

Cut the $\frac{1}{8}$ " x $\frac{3}{32}$ " rub rail beams to the length of the flat car.

The brake stanchion is completely in the way of the rub rail on one side of the car. In the 4th picture - the black & white one - you can see a brake wheel post on the end of the car which apparently could be removed for trailer loading & unloading. If you want to go through the work to eliminate the side brake stanchion and create the end one, go ahead. I chose to work around the side stanchion by splitting the rub rail and butting it up to the stanchion on each side. Paint the rub rails to match the color of the flat car. Glue them to the insides of the stakes, with the $\frac{1}{8}$ " being vertical (so it's 1' high x 8" thick), using the $\frac{1}{16}$ " strip to space it 6" above the car deck.

Cut lengths of the rail a little shorter than the rub rails. Visually, I see the rails as ending halfway between the car end and the first stake, or about 18" short of the rub rail end, so the rail should be 3' shorter than the rub rail. Paint the rails the color of the flat car, and glue them to the tops of the rub rails. On the side of the car with the brake stanchion you again have to cut the rail into two pieces.



Here is the car with the stakes, rub rails,
& rails, split around brake stanchion.

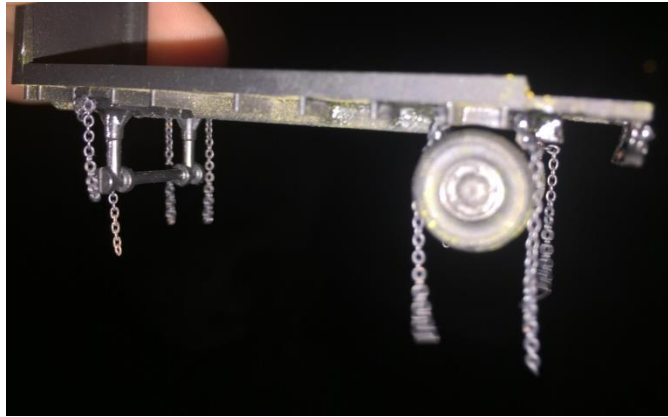
Now it's time to put the trailers on the flat car and install the chains to anchor them. What I chose to do was:

- Attach chains to the underside of the undercarriage of the trailer.
- Put the body on the undercarriage.
- Glue the trailer to the flat car.
- Attach the 8 chains to the rails/beams of the flat car.
-

The configuration of chains seemed to vary over time. Look at the first picture in this article. What I was able to identify out of that was 4 chains on each side:

- Two attached to the rear axle, going diagonally forward & backward
- One at the front edge of the front legs, going diagonally forward
- One at the outside of the middle of the front legs, going straight sideways
-

Attaching 8 chains to a trailer undercarriage takes a little time, but if you use CA (superglue) you can do one every couple minutes. I found it easiest to attach my full length of chain to each point, and when it dried, cut the chain to length.



Here is an undercarriage with the 8 chains attached.

Putting the body on the undercarriage and gluing the trailer to the flat car are pretty trivial steps, so I won't talk about them here, other than to say be sure the chains are all out of the way and free so you can attach them to the rails/beams. Once the trailers have been glued to the car, it's easier if you temporarily remove the bodies.

Attaching the 8 chains to the rails/beams of the flat car is a really tricky step. For each chain, hold the car (with the trailer undercarriages on it) at such an angle that the chain you are working on angles out from the trailer to the rail at the angle you want. Cut the chain to the length that it will just touch the top of the rail at that angle. I cut the chains with some fine snips that were almost like scissors - Use something that you can get in there. The again hold the flat car at the angle so the chain just touches the top of the rail, apply a drop of CA (superglue), and hold it steady for 30 seconds, or however long it takes that the glue is tacky enough that the chain will stay in place.



Once you have glued all 8 chains, you will probably find glossy spots where you glued the trailer wheels & legs and the chains, so touch them up with your flat-finish paint.

The next step is to attach folding bridge plate ramps to the ends of the cars. Looking from the trailers, there should be one ramp on the left side at each end of the car. When the ramps of two coupled cars were lowered, that resulted in a pair of ramps to drive on. These are just barely visible in the 4th

picture - the black & white one. Again, I guessed by eyeballing that the ramps should be about 4' long and 18" wide. Just cut them out of styrene, paint them, and glue them on.

Now is probably a good time to do the simple regular assembly of the flat car - weight, underbody, trucks, couplers, & brake wheel. Typically the brake wheel comes as black plastic, so paint it before installing. Then spray the entire flat car with clear flat.

The final step is to put the trailer bodies back on the underbodies, and glue them in place. The combination of the rubber rails, the chains, the bridge plate ramps, the 20' trailers with back platforms, and the 1950s lettering make this a unique freight car.

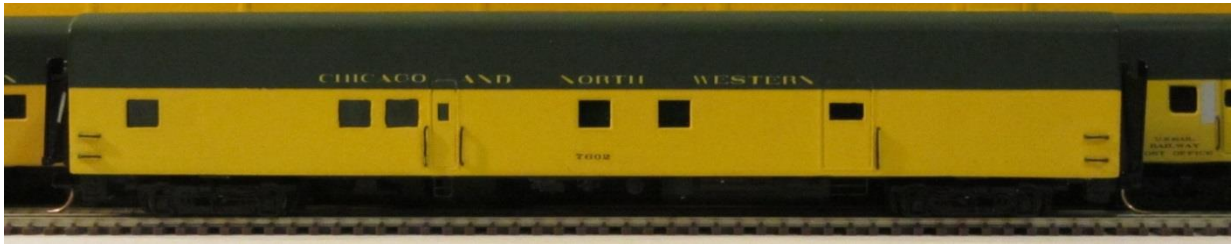


Photos taken at Prairie Scale Model Railroad Club in Lombard, IL

FALSE ROOF BILEVELS 1

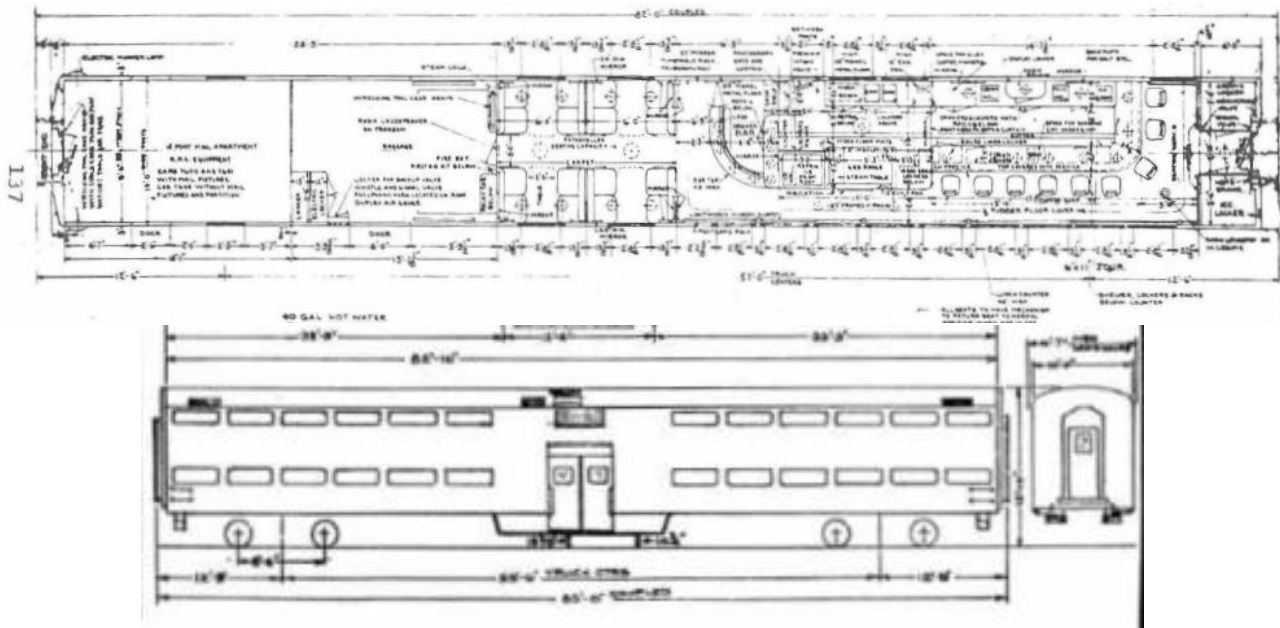
RPO-BAGGAGE TAP/TAVERN/LOUNGE #7602

By David Prawdzik



In 1958 C&NW sent four "400" Streamline cars to Pullman Standard to be rebuilt into False Roof Bi-Levels. They sent Two RPO-Baggage-Tap/Tavern/Lounge cars #7601, #7602 along with two Diners #6953, #6954. They were converted at this time to use HEP for Heating, Air-conditioning and lighting from the E or F units HEP power generators that replaced the steam generators. I researched this project for over a year. I want to thank CNWHS, Midwest Transportation & Development Corporation and others for information/pictures.

This is how I Kit Bashed/Constructed RPO-Baggage-Tap/Tavern/Lounge car #7602. I started with a Des Plaines Hobbies CHICAGO AND NORTH WESTERN "400" Baggage TAP LOUNGE KIT.



With the information I received this next step was to figure/relocate the windows/doors locations and proper height of car on rails as per information received from CNWHS and MT&DC. The diagram indicates the height from the top of rail to top of car is 15 feet 10 inches.



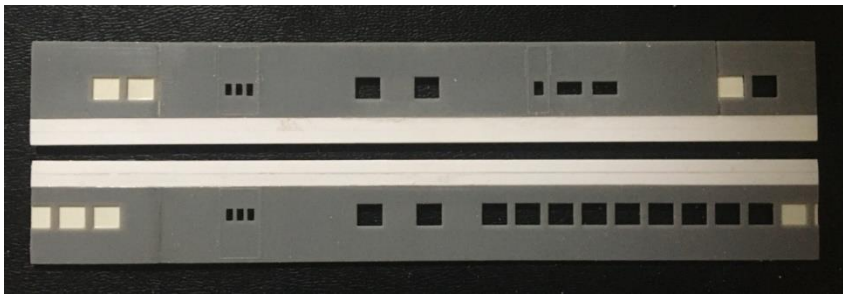
I scanned the kit and used the pieces which I cut, taped together, used green pencil to show windows being kept, black pencil for windows to be filled in and also pictures of the prototype car.



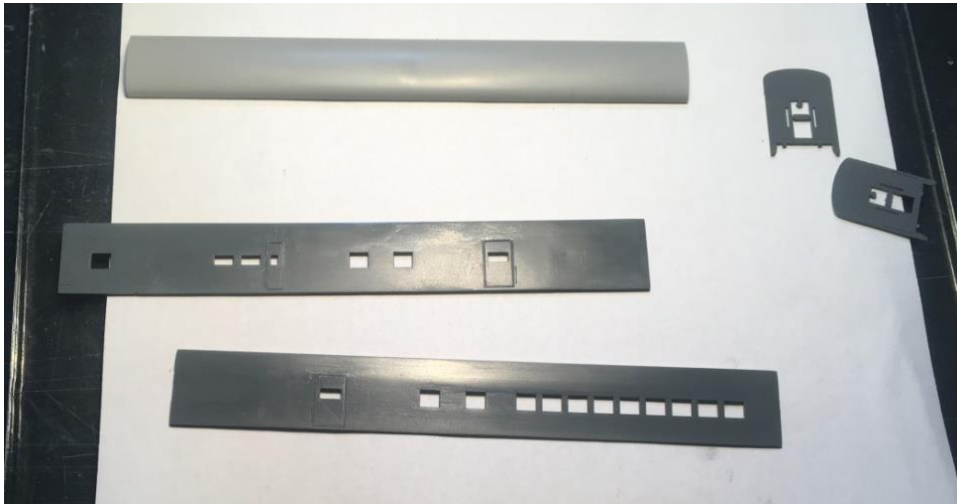
These pictures show where I made the cuts on both sides.



Here we have the reassembled sides with internal bracing, and the strips for adding extra height.



Exterior view of the sides with some windows filled and with height added. On the right is one of the car ends showing the added height and the braces for the sides.



After priming with Tru-Color primer, the sides, ends and roof are ready to be assembled.



When assembling the sides and ends, make sure to keep the corners square. Here we see the car with the roof added, showing the areas needing to be filled.



The car with filler putty, before sanding.

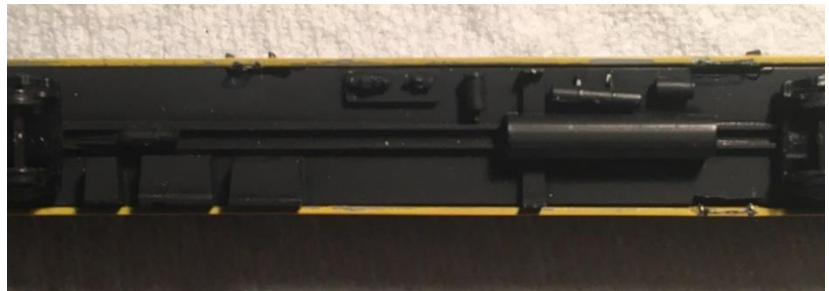
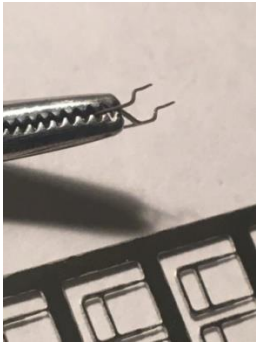
I painted the car with custom Tru-Color mixes, using a Stagecoach Yellow I mixed myself, and CNW Green.



I printed sample lettering templates for size and spacing. I couldn't print the lettering in yellow and a special printer is needed to print light color decals for over a dark color area. I sent my file to Circus City Decals to be printed.



After applying decals and flat finish, I installed handmade grab irons. For window glazing I used .010 thousand clear sheet styrene, tinted green with Tamiya clear green and glued in.



I modified Gold Metal Models stirrups and glued them in from the inside of the shell, added underbody detail, painted and flat finished it, and used Micro Trains 4 wheel passenger trucks.



And here we have it! The finished model with American Limited working diaphragms installed.

PHOTO GALLERY

Clair Downs has sent us some photos of what he's been working on to chase away the pandemic blues.

RSD-4 1516 started as an Atlas model that Clair has detailed and painted for fellow CNWHS member Steve Sorensen. Clair says "weathering is my weakest point," but I think I disagree! I especially like how the body grime in some places has rubbed off – probably onto the crew's jackets!



Clair also modified this Proto 2000 for Steve with a Lines West cab and other details. He said the Lines West 3d printed cab “takes a little getting used to,” but I think you’ll agree the model looks really fine. Makes me want to get one of those cabs for my own Proto CNW SD unit.



MODELING FROM THE ARCHIVES

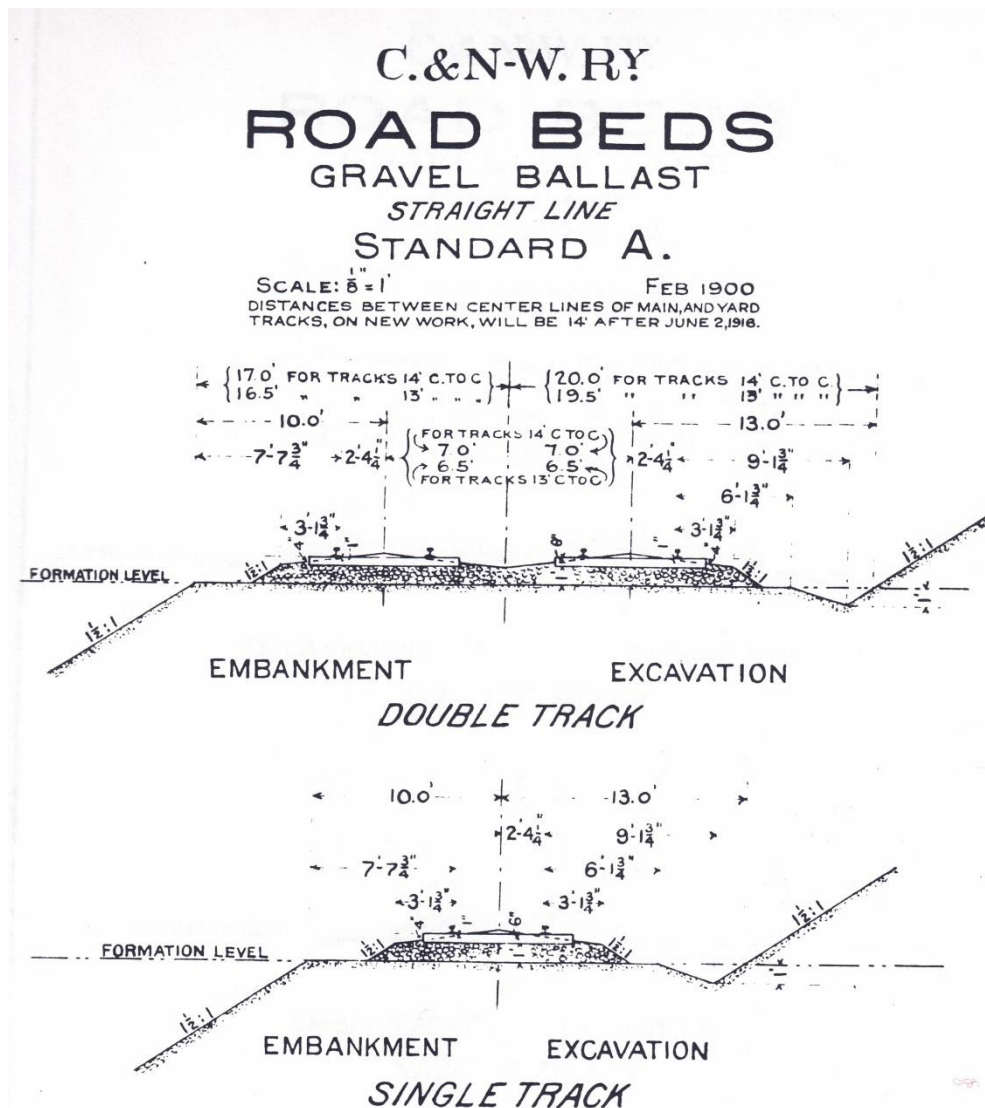
by Michael Mornard

Roadbed Profiles from the Standards Book

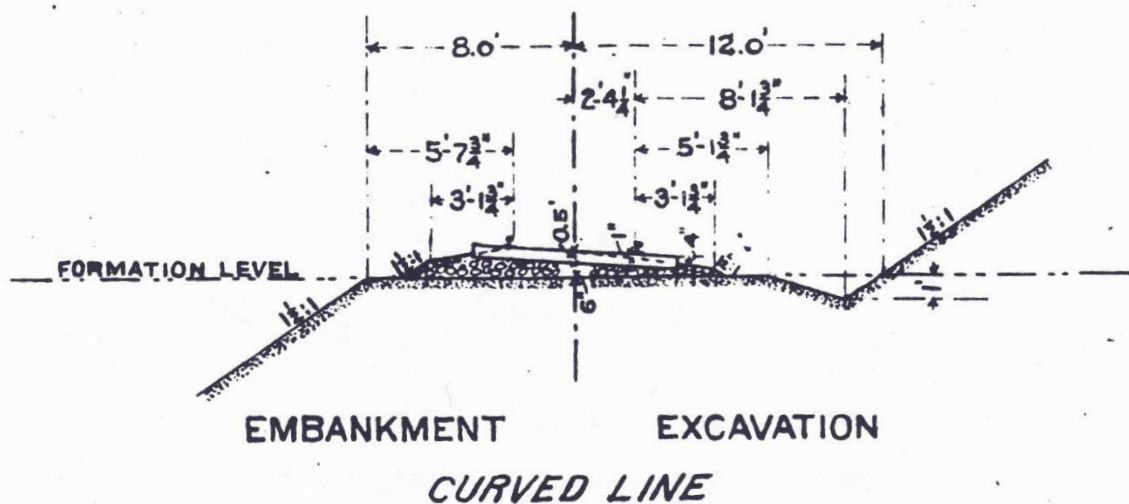
Trains run on tracks, and tracks sit on roadbed. The CNW Standard Books include the actual ballast and subroadbed profiles the CNW used.

There are three classes of track shown. The Standards Books include Class A for 1900 and 1926, Class B for 1900, and Class C for 1900. In addition, I have obtained the profile for Class A in 1965. These are shown below. (Since they are JPEG images, you can enlarge them considerably on your computer.)

Standard A, 1900



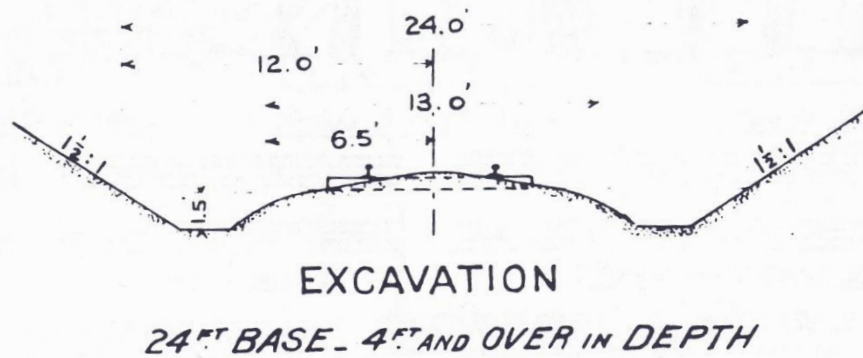
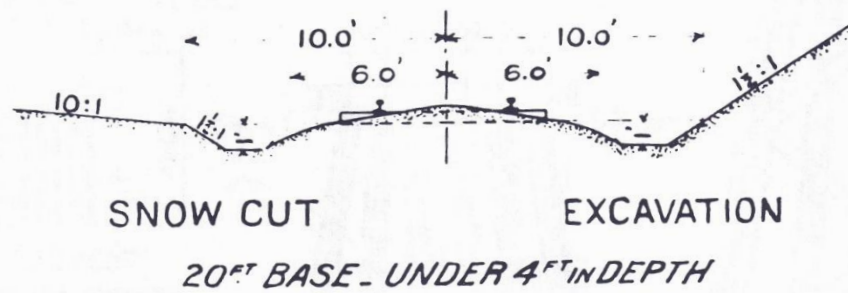
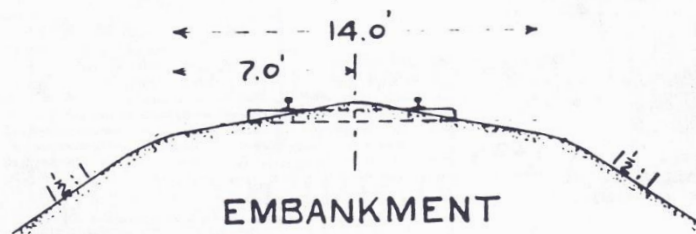
FEB. 1900



C.&N-W. RY
ROAD BEDS
EARTH BALLAST
SINGLE TRACK
STANDARD C.

SCALE: $\frac{1}{8}'' = 1'$

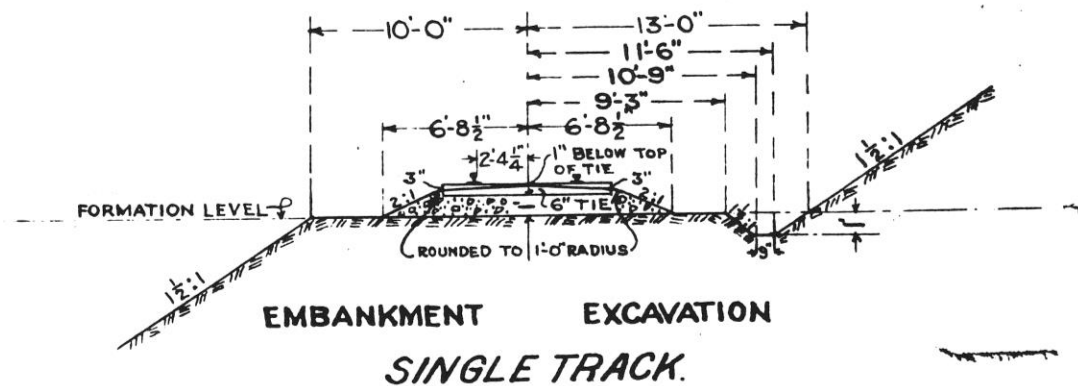
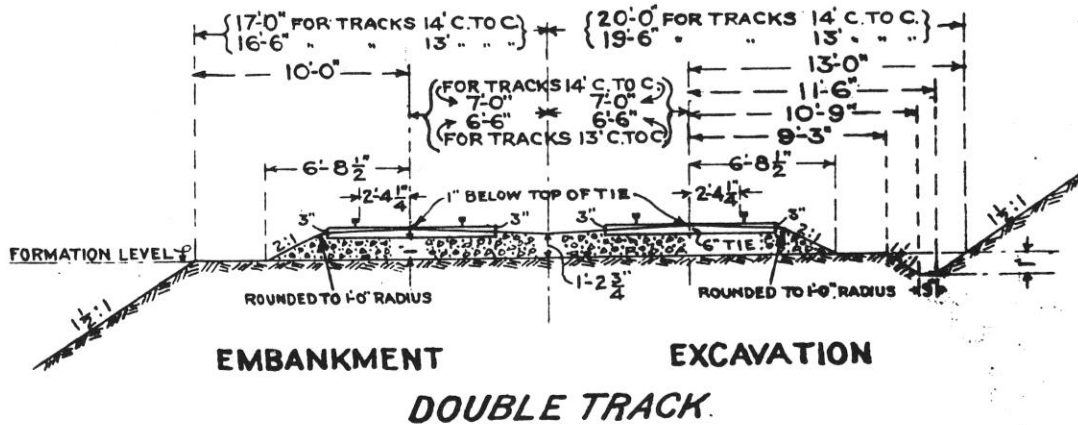
FEB. 1900



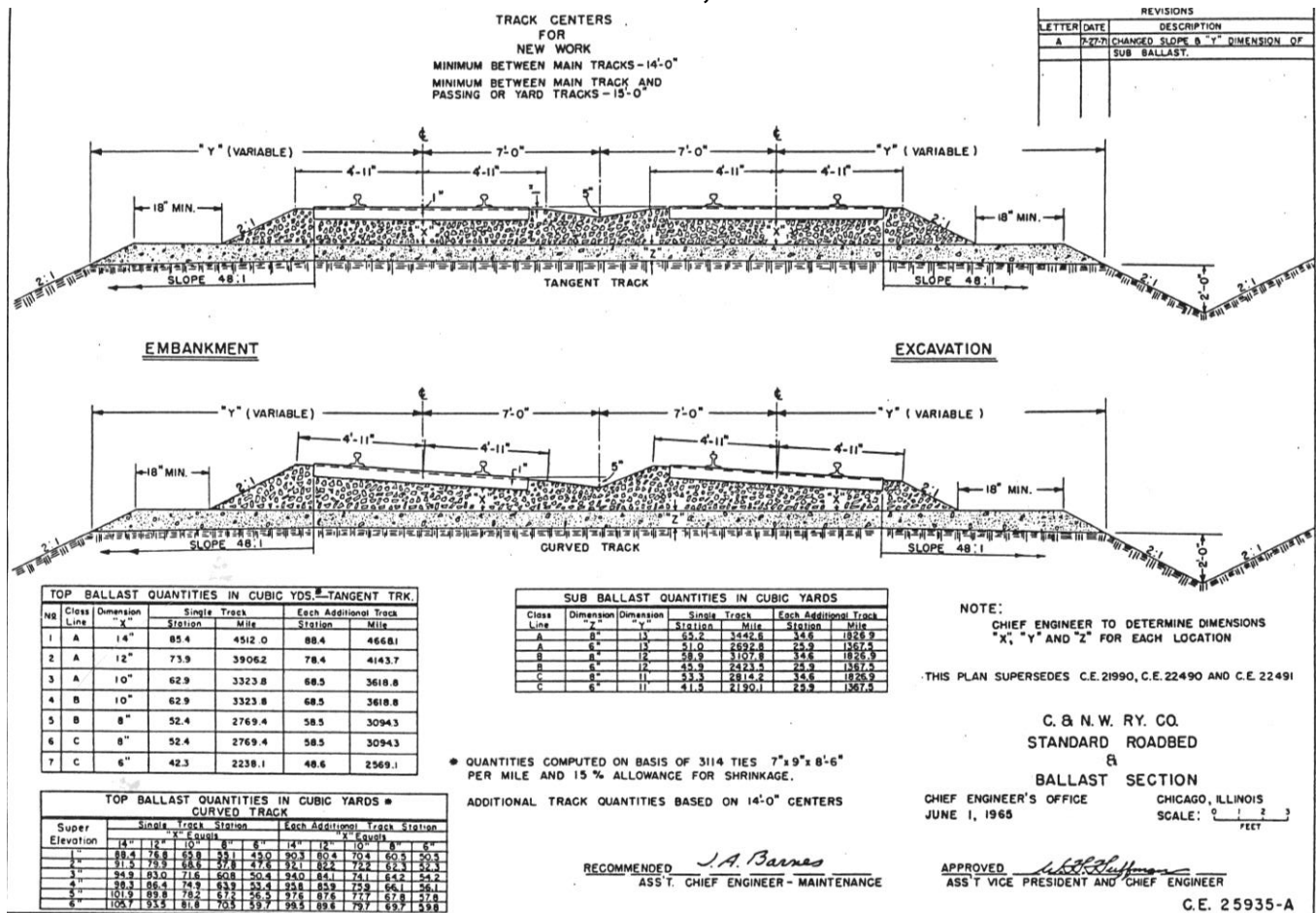
Standard A, 1926

C & N-W.R.Y.
ROAD BEDS
ROCK BALLAST
STRAIGHT LINE
STANDARD A.

SCALE: $\frac{1}{8}" = 1'$ FEB. 1926.
TRACK CENTERS FOR NEW WORK, MAIN & YARD
TRACKS, INCREASED TO 14'-0" JUNE 2ND 1916.



Standard A, 1965



There's a LOT of information on these profiles. What struck me immediately, though, is the depth of ballast. In both the 1900 and 1926 Standard A profile, the ballast depth is 1'. In the 1965 profile, it varies from 10" to 14". In HO scale, that scales from 0.114" to 0.160". In other words, a lot closer to 1/8" (0.125") than it is to 1/4", 0.250, the thickness of typical "HO scale" cork roadbed.

And let's look at the slopes of the ballast and subroadbed. On all of our examples, from 1900 to 1965, Standard A, B, and C, our slope is either 1 1/2:1 or 2:1. If you do the trig, you discover that 1 1/2:1 is a 33.6 degree angle, and 2:1 is a 26.6 degree angle. Once again, neither is even close to the 45 degree angle we find on commercial cork roadbed... that would be 1:1.

And for that matter, notice the contour extends beyond just the ballast slope. Subroadbed is also an important part of the right of way; trackage must have adequate drainage, not just to avoid washouts, but to allow for traffic at the rated capacity. Even if we use 1/8 thick roadbed in HO scale, we're not going to duplicate the look of actual track if we just slap it down on plywood or foam board.

I invite you to look the profiles over to see what ideas they give you. Next issue I'll talk about some techniques and ideas for modeling.