Signature railcars • DCC ready? • Coal/sulphur gons

Model Railroad Hobbyist magazine™

April 2013

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MRH Gen2

Modeling Erie boxcars from the 1950s

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HAVING FUN WITH TRAINS

Model Railroad Hobbyist magazine™

Front Cover: Assistant Editor Don Hanley shows us how he models Erie boxcars from the 1950s in this issue's cover story. Don needs a whole fleet of these cars for his planned layout, so he shows you how to mass scratchbuild these cars. Cover photo by Don Hanley.

ISSN 2152-7423

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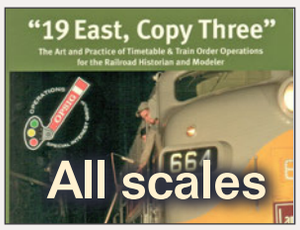

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Publisher's Musings editorial

by Joe Fugate

As I look at what MRH is doing to help modelers with their hobby pursuits, I see all the content we're producing to help those building layouts and doing modeling projects for those layouts. But what about those who don't have layouts? What is MRH doing to help the so-called "armchair modeler" to get more out of the hobby?.

I could argue because we're a free magazine you can easily access through the Internet, we're likely to have a disproportionately large contingent of armchair modelers among our number.

First, let's drop the notion that "armchair modeler" is a derogatory term. It's not. Armchair modeling needs to be elevated to an equal footing with those actively building a layout.

One thought is to start a column specifically for the armchair modeler. Ideally, we want a serious lifelong armchair modeler to author the column each month, so we get the most experienced view and insight. Find details about the launch of this new column in Staff Notes, on page 3.

All that planning, dreaming, and mental contemplation about the hobby can be done well, or be done poorly. Why not show our

readers how to avoid building a layout and how to avoid doing any modeling? Show that being an armchair modeler can clearly be wiser than taking the risk you will screw something up.

We could title the column "Sitting there" and include a photo of a modeler in his armchair, pipe in mouth, dog at his side, and a tablet in his hand (keeping up with the times). We would not want any actual models in the picture, because then readers might confuse the column with one about actually building something.

Column titles that come to mind include:

- Layout planning for the budget constrained: taking your shelf width to zero
- Look like an active modeler even with no money, no time, and no space
- How to avoid burnout – honing procrastination to a fine art
- 10 steps to zero mistakes: the guide to healthy analysis paralysis
- Chainsaw layouts are

dangerous – why staying in the armchair is much safer

Let's take the first column title about pushing your shelf width to zero and see how useful such a column could be.

An important concept supporting the choice of narrow benchwork is that narrowing the benchwork to get more aisle space actually makes the layout more enjoyable. It's easier to get around and you can get more modelers into the layout room – all big pluses. Also, the narrower you make the benchwork, the less scenery you need to build, saving valuable money and time.

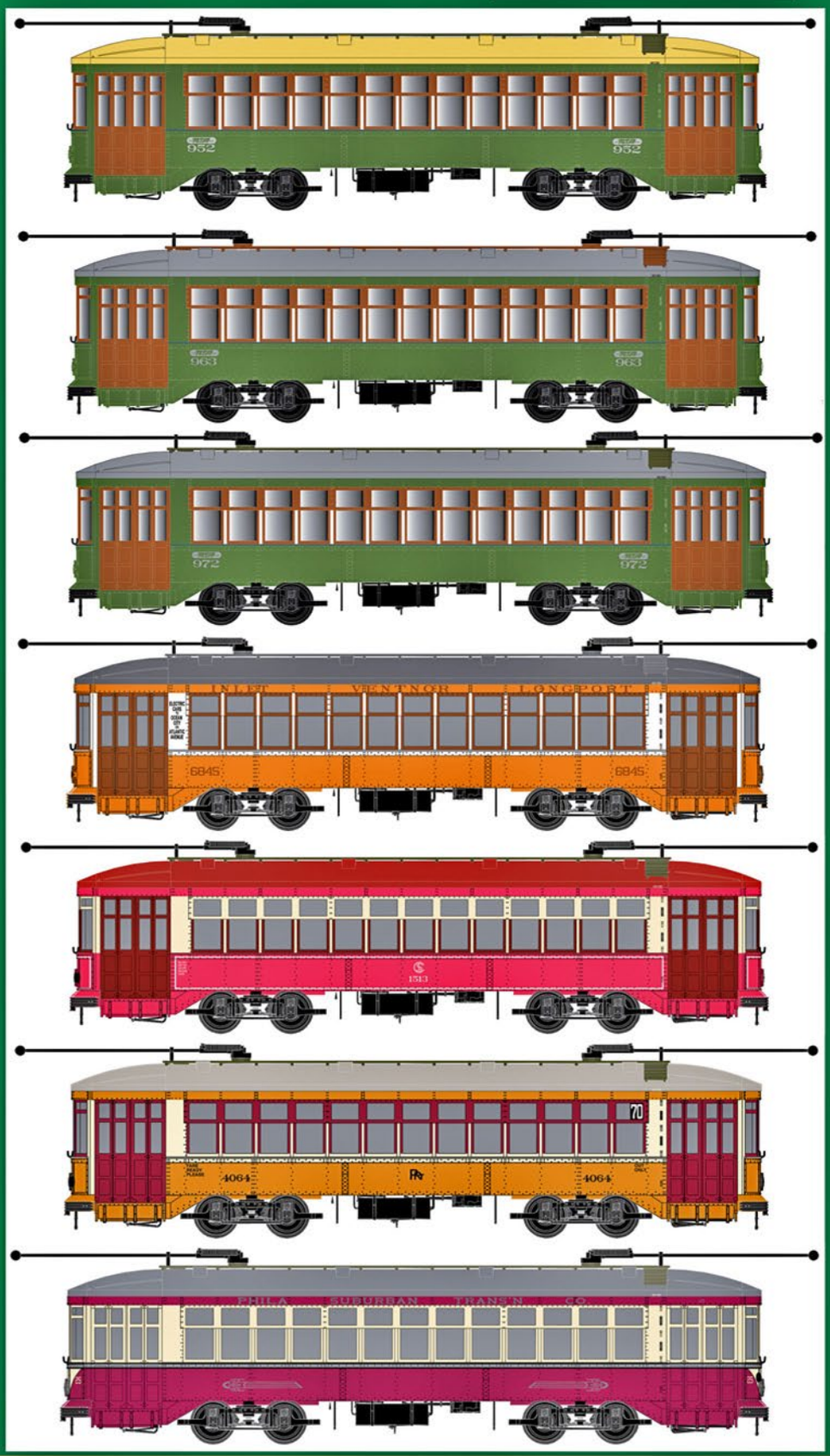
The obvious solution to the layout space problem is to push the aisle width to all of the available room width and to shrink the shelf width to zero, thereby reducing the layout cost to virtually nothing and allow getting the maximum number of modelers into the given layout space. The armchair modeler who never builds a layout is crazy like a fox when you realize these benefits!

Armchair modelers need to know their approach to the hobby makes a lot of sense, and that we can and should promote the great wisdom of only contemplating the hobby and never doing it.

So it's settled. No longer will MRH overlook the armchair modeler.

Our new monthly column, "Sitting there" will show armchair modelers (and active modelers who need to break their bad habit of over-achievement) how to get more out of never spending money on the hobby and promote the benefits of ever longer armchair contemplation time.

In case you're wondering when this new column will debut, see spread 3 of the Staff Notes. ☑



Notes from the MRH Staff

Why subscribing matters, Yes, MRH is indexed ...

Reader Feedback (click here)

MRH Gen2

Why subscribing matters

Every so often, we like to remind readers who have not subscribed that they should become a subscriber. Since we're free and subscribing is free, you might think subscribing isn't all that important. Nothing could be further from the truth.

As a subscriber, you get weekly emails from us with handy modeling tips, updates on the latest issue release, and hobby vendor product announcements. We also highlight some of the better postings on our website that week. Finally, subscribers get access to the bonus downloads for each issue, which can include some handy issue extras (like detailed plans) that you don’t get in the issue.

We put extra-large downloads in the bonus content for the issue to prevent the magazine itself from getting too large.

Plus, being a subscriber includes more usage benefits on our website. As a subscriber, we track what you’ve read and what you haven’t, so each time you visit the site and log in, we show

March 2012 MRH Ratings

The five top-rated articles in the **March 2012** issue of MRH are:

- **4.8** Yes, it's a model
- **4.6** DCC Impulses - Stayin' alive
- **4.4** Getting Real - Course correction
- **4.3** Tool Shed - Pin Vises
- **4.3** What's neat - Gary Christensen, artist

- Issue overall: **4.4**

Please rate the articles!

Click the reader feedback button on each article and select the star rating you think each article deserves. ***Thank you!***

you what's new since your last visit. See the screen captures (1) and (2) to see a non-subscriber and a subscriber view.

Non-subscribers

1

Recent posts

Type	Post	Author	Replies
Blog	SASME Yard Signal Protection	Benny	2
Blog	New layout build	iandrewmartin	5
Blog	Now I've Done It...	DMKeenan	17
Topic	Shelf Layout for the Livonia, Avon & Lakeville	dnapper	1
Blog	Backdrop Dilemma - That Elusive Appalachian Mountain Look	pldvdk	12

1: For anyone who is not a subscriber, here's what the MRH website recent posts list looks like. It lists type, post title, author, and replies.

Subscribers

2

Type	Post	Author	Replies
Blog	SASME Yard Signal Protection new	Benny	2 2 new
Blog	New layout build	iandrewmartin	5 4 new
Blog	Now I've Done It...	DMKeenan	17 3 new
Topic	Shelf Layout for the Livonia, Avon & Lakeville new	dnapper	1 1 new
Blog	Backdrop Dilemma - That Elusive Appalachian Mountain Look	pldvdk	12

2: For subscribers, useful extra information gets displayed. Any new posts since your last visit get so-marked, and a count of the new replies on all threads is listed.

If you like the magazine each month and wish there was more, then you should become a subscriber and visit our website off and on through the month. Some of the blog posts on our website rival the magazine as to quality and helpful insight!

If you have a question, there's nothing like having tens of thousands of subscribers ready to answer your questions.

Finally, there's great value to MRH from a reader that subscribes. Even though the magazine is free and subscribing is free, a larger subscriber number helps draw more advertisers to us.

So if you've ever thought you like MRH well enough you'd even pay for it, then here's your chance to do something that's just as good: become a subscriber.

Click here to subscribe – free!

Yes, MRH is indexed

We'd also like to remind you MRH is indexed.

If you're wondering what back issue something was in, just use Rod Goodwin's index:

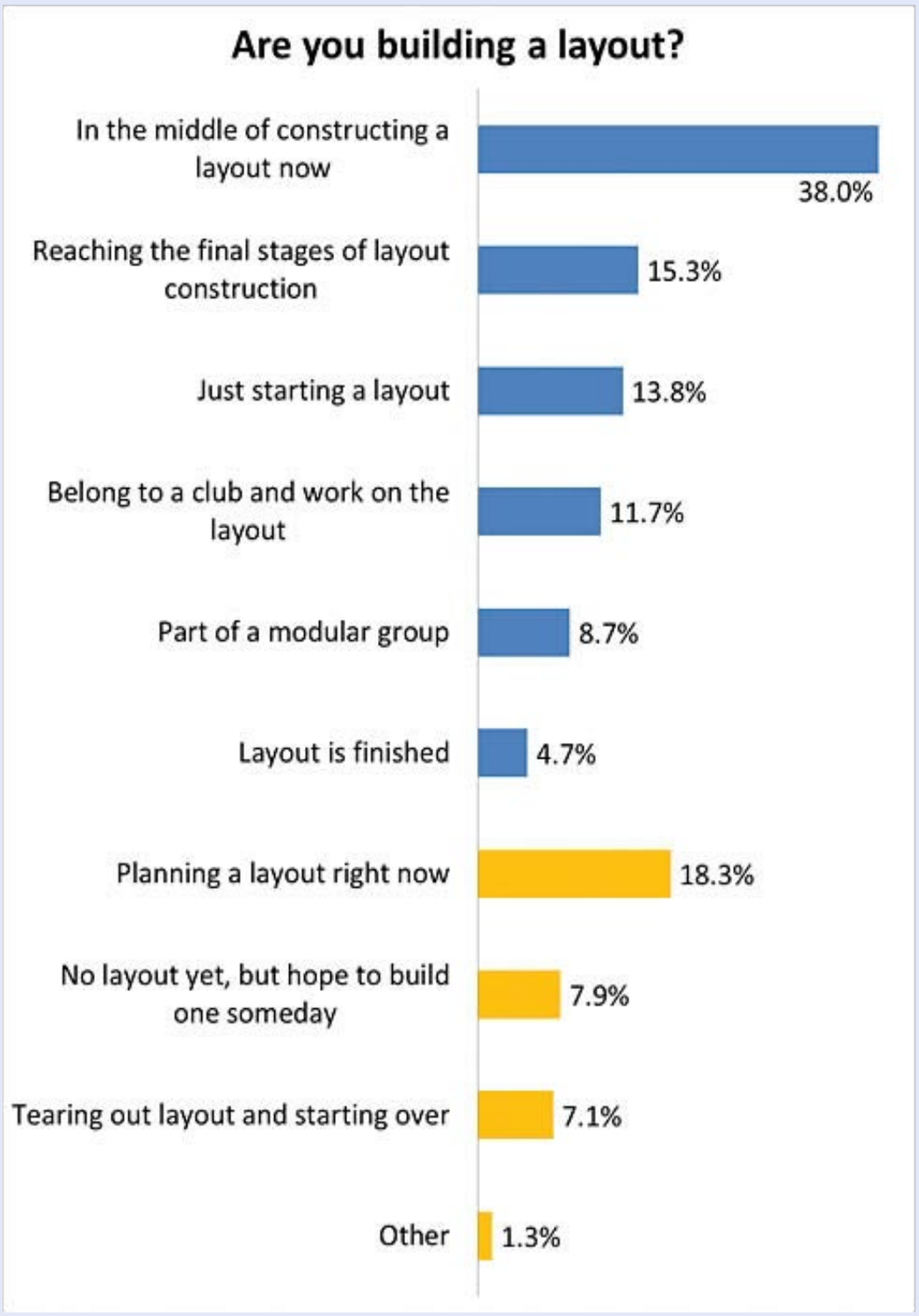
mrhmag.com/magazine/index/rods_index_help

We get several emails every week from someone asking for help finding something in a back issue. So here you go – just use the index!

Armchair modelers, seriously

Okay, so this issue's Publisher Editorial took an April Fool's joke approach to MRH better serving arm-chair model-ers (in case you thought Joe was serious).

If we graph the results of our 2013 Reader Survey, we can see that about 70% of you are building a layout



(total of all the blue bars), and 30% of you are not actively involved in a layout right now (total of all the gold bars).

So all spoofing aside, how does MRH better serve that 30% of you who are currently in armchair status?

Mike Dodd, one of MRH's ever-vigilant copy editors, provided some great thoughts around this topic in a recent staff discussion. Here's what Mike said:

"I think there are many reasons people are armchair modelers. To name a few:

1. Satisfied with buying kits and occasionally building one. Or satisfied with displaying RTR models on a shelf or in a case.
2. More interested in historical research.
3. Actual or perceived lack of space/money/skill to build a layout.

4. Brass collecting can be a hobby unto itself, and an "investment." Some collectors would never dare to run a brass model.

5. Prefers reading and admiring other peoples' work over doing it him/herself.

6. Intimidated by technology and/or others' modeling skills. Prefers something simple like an O27 trolley running back-and-forth on an unscenicked track.

7. Too tired after work to spend time with the hobby.

8. Health issues.

“My dad was a good example of 1, 2, 5, 7, and 8. For my entire childhood and into my early-40s, he said he wanted to build a lay-out, but he never did. He did buy lots of junk from NY/NJ mailorder hobby store sales (remember the grab-bag specials?), and even built a few models over the decades. When he died in 1989, I inherited this stuff, but sold or scrapped all but a few items.

“He read MR and RMC every month, but never started a layout of his own. Even after I built an HO layout in my basement, he didn't start one of his own. He had the space and funds available and my offer to help him plan and build, but he never took advantage of these. By this time, his health was a factor, but not a major factor until years later.

“Looking over the points above, I can imagine some content in MRH devoted to each point. I think focusing on (and validating) a reason for being an armchair modeler and then discussing how to enjoy that aspect of the hobby could useful.

“For example, take #1. There's nothing wrong with buying and displaying models! We could discuss how to display rolling stock attractively (maybe with photos as background), where to find

good deals on models (eBay), and include links to MRH articles on basic kit-assembly techniques.

"Next we could discuss #2, and go into how satisfying it can be to learn things about railroads of years past. How they operated, the equipment they used and the structures they built. Explain how to find information in libraries, at train shows, from historical societies, or online.

"Or how about #3? It's easy and inexpensive to build a simple diorama or switching layout, even without any scenery. Buy an 8' 1x12 pine board at Lowe's and tack down some flex track. Hook up a basic DC power supply and run your favorite engine. Add some cars, and you're running a train.

"Item #4 would be a piece o' cake if you got a brass collector to write it up.

"Even #5 and #6 could be fleshed-out along the "what's wrong with that?" line. If people enjoy and appreciate

others' work, that's fine. Likewise if they want to run plastic tinplate models back-and-forth, if they're having fun, then why not?

"A sensitive author could do something with #7 or #8. Be sympathetic and offer ideas on simple things to do when you're wiped-out. Try a one-hour, not one-evening, project like painting one figure with acrylic paints for easy cleanup. Where can you buy the paint? Hobby shop? Michael's? Wal-Mart? Choose an O or G scale figure if your hands are shaky. Be satisfied with the result; don't expect perfection.

"Of course, we should not assume armchair modelers need ideas on how to start a layout. Speaking to more than just layout builders could be a good thing."

Great thoughts, Mike.

Potential author alert! Would any of you out there consider sending us a submission on any of Mike's points?

If so, we're interested.

Getting better answers on the MRH forum

One of the benefits of being an MRH subscriber, as we mentioned previously, is that you can post questions on the MRH forum – and there are tens of thousands of registered readers who potentially could answer your question.

One problem we've noticed lately, however, is people making posts with titles like "Help!" or "Disaster ..." and that's *all the title* they use on their post.

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← back to previous page of text ...

Unfortunately, that title doesn't help the rest of us know what you're asking about, and many may just bypass your post for something more interesting.

If you want better answers and quicker answers, tell us more about your issue *in your post title*.

For instance, "My Athearn diesel doesn't run" or "Help, ACC'd hand to scenery" work much better. Those who have an answer for your dilemma will be more likely to come to your aid with an answer.

Good outcome from our $500 Starter Layout Contest

We recently received this email from John Bremmer:

“Due to your contest, I am now out of the armchair. I have been interested in trains as long as I can remember. My parents gave me a Lionel 027 train set when I was 5 and my brother handed down a bunch of 1970's N Scale to me when I was about 12.

“[Recently] I drew up a plan for your contest, but I never did submit it.

“A few months ago, I started drawing up a small 6 foot switching layout. This week, I pulled the trigger [on my design]. Most of what I used was my hoard (like most armchair modelers) and in the last week, all I have bought was lumber, wire, 2 bolts and 2 nuts. I am trying to figure out how to make modern looking buildings out of cardstock/my computer.”

Welcome, John, to the ranks of active layout builders!

... On to next page of text ➔

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What's in this issue ...

In the manifest for the April issue we have ...

Third hand: Jack Burgess demonstrates the ultimate glue/solder holder tool – third-hand clamping devices.

Erie Railroad boxcars, part 1: MRH's new assistant editor Don Hanley provides a review of Erie boxcars from the 1950s and then does an in-depth step-by-step on how to produce these cars that are not commercially available. Don's techniques can be adapted to many other railcar modeling projects as well.

Yes, it's a model: Our popular monthly photo feature has more inspiring modeling this issue. Plus, a first: realistic model video!

Coal and sulphur gondola operations: Norm Skretting shares operational insights into coal and sulphur gondola operation on the CN, as well as tips on which cars are available as HO models.

Group operating sessions: Learn what modeling insights an op session event like the Great Basin Getaway can teach you, thanks to this insightful report from MRH staff author John Drye.

Frisco Tower: MRH publishes our very first prototype plans!

First Look: MRH reviews Timetable and Train Order operations book "19 East, Copy 3".

Our regular columns: *Getting Real* columnist Tony Thompson discusses modeling signature freight cars on your layout, showing how just the right cars to get the character you want on your layout. Bruce Petrarca busts the myth of DCC-ready and Ken Patterson takes us on a photo tour of last summer's St. Louis Prototype Modelers meet.

Have a fun read! ■

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QUESTIONS AND ANSWERS

Questions, Answers and Tips is slightly different this month. All of the material is drawn from discussions that appeared as Web/blog posts at mrhmag.com within the past month.

For some reason, far more people read the magazine than look at the forums. Including forum content here gives regular MRH readers a link to some fascinating and helpful forum discussions that are available to anyone.

The answers are shortened a bit, but each one has a link to the complete discussion. The answers are a little longer than usual to give a feel for the give-and-take that develops.

Q. The main industry of my layout will be a cement plant but I can't find a good kit. I'm such a newbie that I'm reluctant to kitbash or scratchbuild. Can someone can provide a link to a good kit or indication on how to scratchbuild one?

– Hylik

A. JohnDRGW answered first: “Walthers has several cement plant kits. Click on the links: Valley Cement Plant at **walthers.com/exec/productinfo/933-3098** and Medusa Cement silos **walthers.com/exec/productinfo/933-3019**.”

Alan (LKandO, a frequent forum visitor) also recommended Medusa Cement as “the default go-to cement plant. Used in one form or another on countless layouts.”

Then Hylik mentioned that he works in N scale, and the responses followed that idea:

Alan suggested he look at **wholesaletrains.com/Detail.asp?ID=200868048** and **wig-wag-trains-cart.com/Walthers/walthers-buildings**, and create a saved search on eBay.

Another reply observed: “Look at other types of silos and industrial buildings, because kits not labeled 'cement plant' can be combined into what you want. If you build every kit straight out of the box, your layout looks like Waltherville and Katotown, and doesn't have that individual stamp.”

Highway70 pointed out that Walthers made Medusa Cement in both N and HO, and that the silos of the HO model can be modified into fairly accurate pieces for an N scale model of a cement distribution plant located in West Sacramento, CA. (On the forum thread, he posted a Bing Maps link that shows the plant.)

Forum regular Rob Spangler asked for more particulars and offered some ideas:

“Do you want a plant that produces cement from raw materials, or one that handles local distribution?

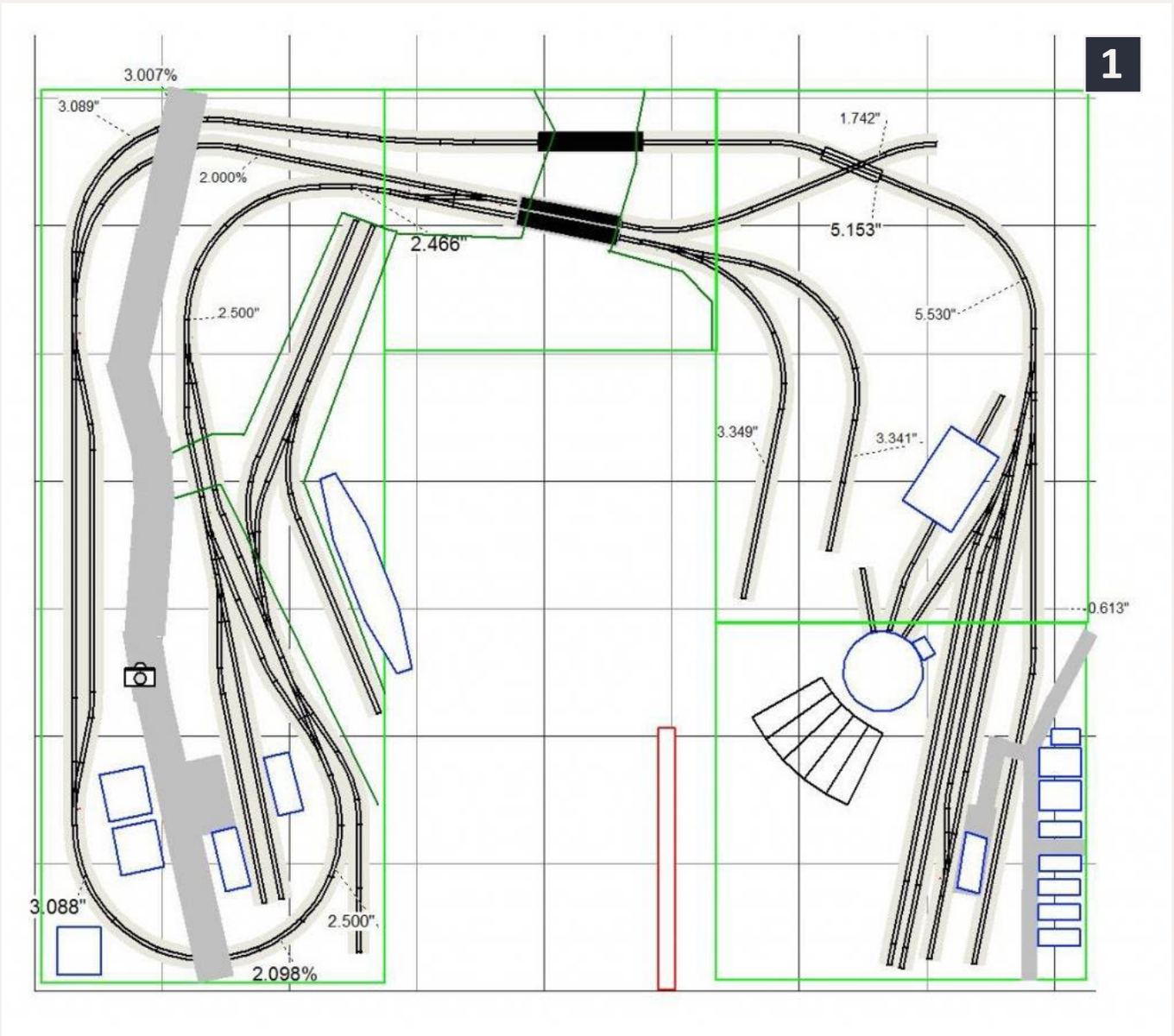
“If the former, try my old blog post on a plant I kitbashed out of various components **mrhmag.com/node/4409**.

“Out of the box, the Walthers Medusa kit is a local distribution

facility, receiving hopper loads of already-produced cement from elsewhere and storing them for future use in finished concrete."

Hylik said he wanted to built a plant that produces cement from raw materials. "Also, I found this: cemex.co.uk/cement-production-process.aspx ," he said. "Very instructional."

Dave Branum asked, "Do you have a location in mind for your layout? I imagine plants look different in different parts of the country. I'd look on Google Earth or Bing Maps and view the



1: How do you fit a large cement production plant into a layout? The proposed site is at the right side, just a little above the turntable on the plan. The grid has 12" squares.

aerial photos of plants in areas like you want to model. There is a closed plant at Davenport, Calif., and another plant along the UP just east of Tehachapi for starters.

“As for modeling a plant, the part that interfaces with the railroad would be cement loading silos for product and maybe coal unloading facilities if the plant gets fuel coal by rail. Once the rail facilities are modeled, the rest of the plant could be fit in as partial structures, or backdrop photos or paintings depending on the space you have to work with.”

That's when Hylik revealed a little more information:

“I'm not in the USA. I see that as an advantage because I can select just the parts I want from several real plants and model that.” He posted his track plan (1) and said, “As the plant will be a major industry on the layout, it will have considerable space compared to other industries.

The plant should be located at the right side, just a little above the turntable on the plan. The turntable and terminal is on a high level, the plant on lower ground. The grid has 12" squares. Nothing is built yet so I can accept more suggestions.”

There's more to read at **mrhmag.com/node/12676**.

– MRH Forum

Q. Say you had a very winding, steep, mountainous descent with loaded cars of coal or ore -- how would the motive power be arranged to best handle the momentum, braking, car slack, etc? Prototypical, modeling, or theoretical answers OK.

– Ken Goudsward

A. Milt Spanton was first to reply:

“The Missabe's worst grade was the 2.2 percent descent from its ore sorting yards at Proctor, Minn., 7.7 miles to the Duluth ore docks. They set retainers on a portion of the train, based on a table in the rules book. The train's power is/was only on

the front, with up to 110 cars. In the steam era, the loco ran backwards. In the pre-radio days, the conductor would start dumping air from his end (the caboose) if he judged the train was moving too fast.

Travis added: “Milt pretty much nailed it on that one. In modern times you may see some distributed power on the rear end, but what he said about the retainer valves pretty much sums it up.” (Setting retainers reduced train line pressure, allowing brake shoes to drag on the wheels, keeping the speed of the train in check. See more at **railway-technical.com/brake2.shtml#Retainers**.)

Dave Husman pointed out that train handling techniques have changed over the years as technology changes: “Power on the point,” Dave said. “Unless the railroad has remote control or DPU they probably wouldn't have power on the rear.”

Nick Brodar added another perspective: “If you needed helpers on the way up, nowadays, many places leave them attached on the way down for added dynamics. Midtrain or rear end.”

Dynamic brakes on diesel-electric and electric locomotives use the traction motors as generators to increase rolling resistance. The energy created is dissipated as heat through grids, or fed back into the overhead wire system.

Ken Rickman, who is a locomotive engineer when he isn't posting to MRH or scratchbuilding steam engines, added, “Since the entire train would be descending the grade, the slack should remain bunched. Modern practice would be to have the locomotives on the head end, using dynamic braking if possible, or perhaps a combination of dynamic and air brakes.

As has been said, if the train had helpers of DP (distributed power) units then they would likely be assisting in braking as well.

“Depending on the grade, the tonnage, and the situation, there is a possibility that an engineer who was using air brakes alone might have to pull the slack out, pulling against the brakes without releasing them. This could be because a section of the grade is not as steep, and the braking force needed elsewhere would stop the train on that portion, or because he for whatever reason used more air than was needed to control the speed. I have seen this happen in situations where some braking is needed, but the minimum reduction which will allow a running release (releasing without stopping the train) is too much and will unduly slow or stop the train. Still, in all these situations, the locomotives would be on the head end.”

Tom VanWormer explained how it was done in the days of full crews: “The train would be inspected by the crew and car inspectors at the station at the top of the grade. The crew would set all of the retainers. You could only have one car without air brakes for every four cars with air brakes. All of the air brake-equipped cars would be behind the engine and the cars without air brakes would be at the end of the train.

“The brakemen would all be "decorating" the car tops with each brakeman responsible for four cars. When the engineer whistled for brakes, they would tighten down the brakes on their four cars, and then be prepared to tighten them down again when the engineer whistled for brakes again. When the train reached the bottom of the grade it would stop to cool the wheels, release all the retainer valves and unwind the brake wheels.”

Mike Ruby added “show” to the show-and-tell:

“On the next page is a video **(2)** on my layout of a train descending a 4% grade. I also run trains with a rear DPU. The area I model has done both ways. Spreading the locos through the train reduces the forces trying to derail it. I don't need the locos for the descent but do require the power for the climbs.

Playback problems? Click to try a different version.

The complete thread is at mrhmag.com/node/12284.

– MRH Forum

Q. **I need to understand the math to install an Atlas #3.5 wye (3) to connect two parallel tracks to converge via the wye into one track. The center lines of the parallel tracks will be 3 to 4 inches apart, depending on what radius and length of track I need to make this work. I will be running passenger cars, so it is critical that I have good length and radii for this.**

– Moose2013

A. Responders took a pragmatic view.

“Moose, you are over thinking the problem,” said Tom VanWormer. “What railroad are you modeling? What era? In the 1970s the double track center line was normally 16 to 20 feet apart. In the '20s to '50s the track center line was 13 feet. For a high speed passenger line give yourself two passenger lengths to transition from the wye to the mainline track so you don't induce any S curves into your track and lay your track by eye. That way your passenger trains will smoothly transit the track.”

"Eyeball it," agreed Dave Husman. "A 3.5 wye is the equivalent of a #7 switch. Just install flex track and eyeball in the flex track. If it looks like a smooth curve it will operate smooth."

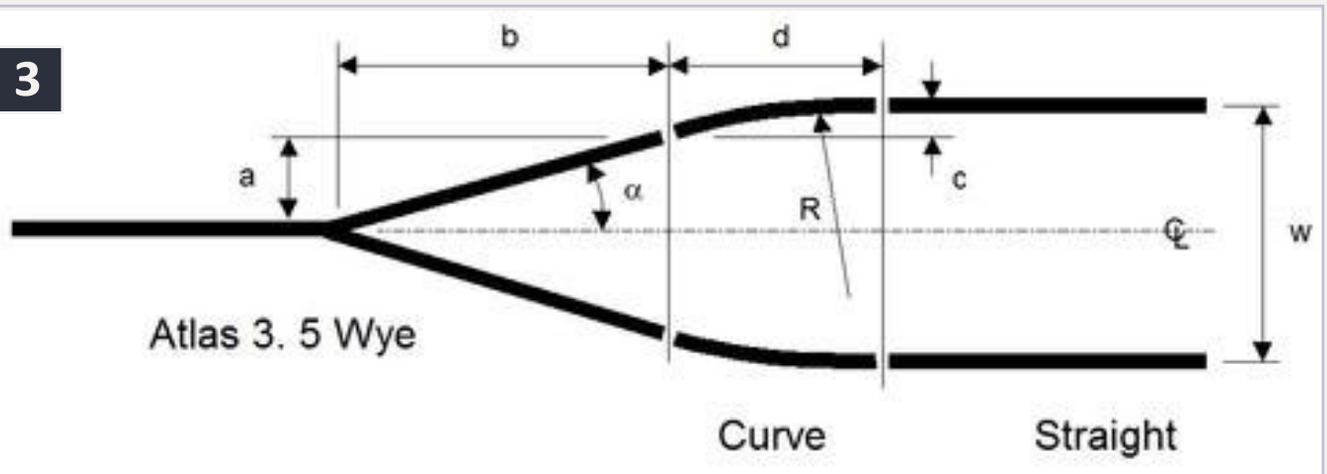
"Yeah, much faster than trying to calc it out," said ctxmf74. "If you have the switch, temporarily tack it and some flex track down in the desired configuration and push some of your longest cars thru it to see how it works. Then adjust the design if necessary. Way more fun to play with the trains than to play with the numbers."

Turns out the math is the big attraction for Moose. "Seriously, eyeing relative track placement would be difficult given what I'm trying to lay out," he said. "Working through the numbers makes it easier for me to understand what difficulties I might have and how to avoid them. People enjoy railroad modeling for various reasons. Part of my enjoyment comes from playing with the numbers."

Read the complete thread at **mrhmag.com/node/12755**.

– MRH Forum

3



a = _____ inch = b * tan α
b = _____ inch = a / tan α
c = _____ inch =
d = _____ inch =
R = _____ inch =
w = _____ inch = 2 x (a + c)
α = _____ degree = arctan (a / b)
Need (b + d) > L, where L = passenger car length = 6.0 inch

TIPS

Storage tools for rolling stock

As I've been unpacking from my move to Florida it became important to have a way to organize and find my rolling stock for two reasons: So I can sell certain items; and so I can locate specific cars to run on our club layout. I started by using an iPad app to organize the cars and put them on shelves; however, I realized that I needed to remove these shelves in order to build my layout.

What to do? I decided to using six-drawer plastic rolling carts (4). Each drawer typically holds 12 cars and a cart holds about 72 cars depending on their length. I tried to organize similar cars in the same drawers, but this isn't necessary since I can locate them quickly with the app or with a printed spreadsheet.

I lined the bottom of the drawers with rubberized shelf liner for $1.99 a roll to keep the cars from rolling. One roll of the shelf liner does six drawers, or one cart. I cut cardboard strips to go between the cars to protect them.

To find a car, I simply enter what I want to find, like "Tank car" or "467113" or "metal wheels," and I'm presented with a list of cars that match. Once I pick what I want, then it's just a matter of going to "Rolling Cart 1", "Drawer C", position "Back 3" to retrieve that car (the app picture is posted on the blog).

The app is called Bento by FileMaker, Inc. and is available at the iTunes App store. It comes with a number of database

templates but not a model railroad inventory. I just edited the home inventory app to the fields I wanted, and it is very easy to learn even without reading the documentation. I like the fact that I can capture an image as I make a new record (using my iPad). A major disadvantage is that FileMaker doesn't have a PC version of their software to which you can sync, but you can output and email an Excel spreadsheet. Unfortunately, those spreadsheets do not contain any images, so I email them (from the app) separately to my PC.

There are some other great inventory programs available including Easy Model Railroad Inventory – here's a link:

mrhmag.com/node/4752.

On my previous Richlawn Railroad layout I found myself running a very small subset of my cars because it wasn't easy to find or switch out cars. Now I'll be able to quickly locate any car.

See the complete thread and more photos at mrhmag.com/node/12784.

– Rick Wade

4: Rick Wade organizes similar cars in the same drawers and can locate them quickly with an app or a printed spreadsheet.

Reader Feedback (click here)

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Ready, Set, Go!

The myth of DCC Ready

Reader Feedback
(click here)

DCC Impulses column

by Bruce Petrarca

Your guide to terminology..

First off this month, let me appologize for a change in my website. Just as last month's column was going to print, I found that I needed to change my website authoring software. The new software wouldn't handle file names longer than 27 chacters. There were a few things that the new software won't accommodate in file structure, too. So, some things had to change. This may mean that your old links to my site won't work. I suggest that, if you are having issues, you go to the homepage (MrDCCu.com) and navigate from there. Save your new links. I expect this format to be stable for two or three years, at least! I took this opportunity to freshen the site's look. I hope you like the new look.

MRH columnist Richard Bale asked me about the confusion over "DCC-Ready" type nomanclature on locomotives. I decided that it was a deep enough subject to warrant a column, so here goes.

I did a clinic at a lot of NMRA conventions up until about 5 years ago, entitled, "***DCC-Ready? The Good, The Bad, and The UGLY!***" In it, I dealt with the state of DCC-awareness at that time. On my website (mrdccu.com/curriculum/ready.htm), I have a page about the subject. This page has a link to the presentation from my NMRA clinic, for a historical perspective. You may wish to detour there before going further in this column.

First, let me state that things are getting better. A decade ago, the terminology was very confusing as manufacturers scrambled to be able to claim some level of DCC-awareness. Alas, many of these locos are still on the shelves, so the watch phrase is “caveat emptor" – buyer beware.

Terminology

I’m going to define what I feel are correct categories and then work forward with what is on the market to fit MY criteria. This is MY terminology, not some bureaucratic definition.

1: Blackstone HOn3 loco designed by the SoundTraxx folks. Photo courtesy of Blackstone Models.

DCC-Installed

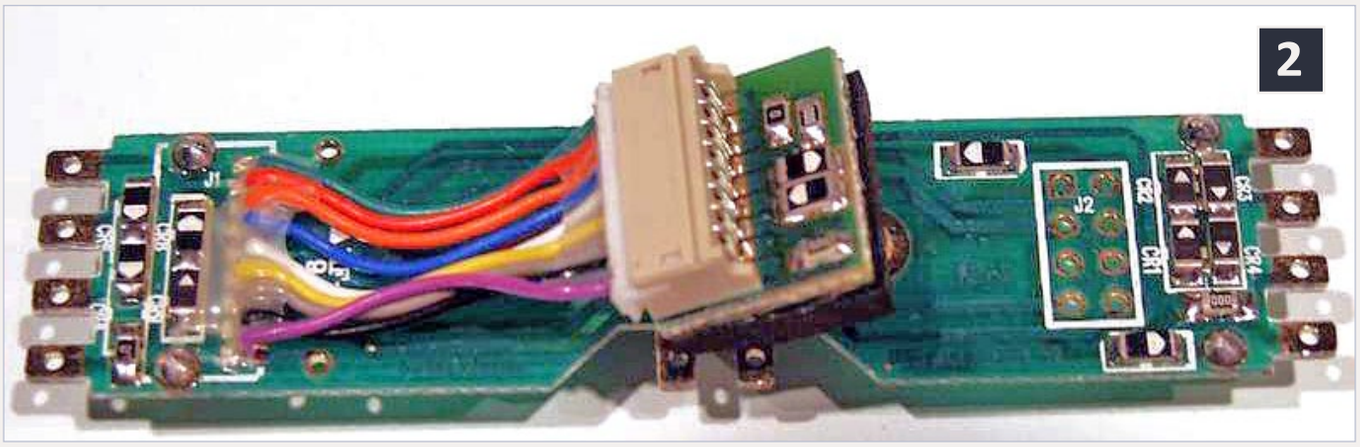
This means that there is a DCC decoder in the loco as it comes from the manufacturer. It may be a motor and light decoder; or a decoder for motor, lights and sound.

Frequently, although the loco packaging sounds as if it features a name-brand decoder, that decoder may be a downgraded version. Some loco manufacturers order special decoders from the well-known sound decoder manufacturers, but with reduced features to reduce cost. Most times, the manufacturer won't tell you about the downgrade on the box.

Bucking that trend are the Blackstone (1) locomotives. Since they were designed by the folks at SoundTraxx, they have full featured Tsunami decoders in the models that are "DCC Installed" and the box clearly says "Tsunami Installed."

"In the world of non-sound decoders, the manufacturers frequently don't spring for the top of the line decoder ..."

A prime example of the downgrade are the Bachmann locos sold in the 2010 timeframe that were marketed as having "Tsunami Technology". Yes, the decoders were manufactured by SoundTraxx, using "Tsunami Technology" in terms of the sound recording quality. However, Bachmann asked SoundTraxx to work to a budget. That required a less expensive microprocessor and memory chip. Features were sacrificed on the alter of price. Some folks refer to them as "Pseudonamis". I must, however, give credit to Bachmann. They didn't say that they had Tsunamis in them. The box said that the locos had "DCC sound on-board".



2: Light board from Athearn Ready-to-Run loco.

I have a garden scale (Fn3, 1:20.3) Bachmann Shay that fits into this category. Even though Bachmann put switches in the top of all three cylinders to activate a chuff sequence, they didn't pay SoundTraxx to put the feature in the "DCC sound on-board" decoder. There is no way to add this feature to the decoder. I'm stuck with a loco that has to rely on auto-chuff, even though it has the hardware for a synchronized chuff. This is in a loco with a list price about $1000.

In the world of non-sound decoders, the manufacturers frequently don't spring for the top-of-the-line decoder, either.

In summary, if the manufacturer says that the loco has "DCC Installed", expect that the loco will operate on DCC powered track, but don't expect a top-of-the-line decoder.

DCC-Ready

About eight years ago, I had a customer purchase a Bachmann N-scale loco that was advertised as "DCC-Ready." He brought it to me to install a decoder. I looked inside and didn't find what I really expected, like a socket. So, I called Bachmann and asked what decoder to use. They gave me a part number for an HO-scale decoder. I pointed out to them that the part number

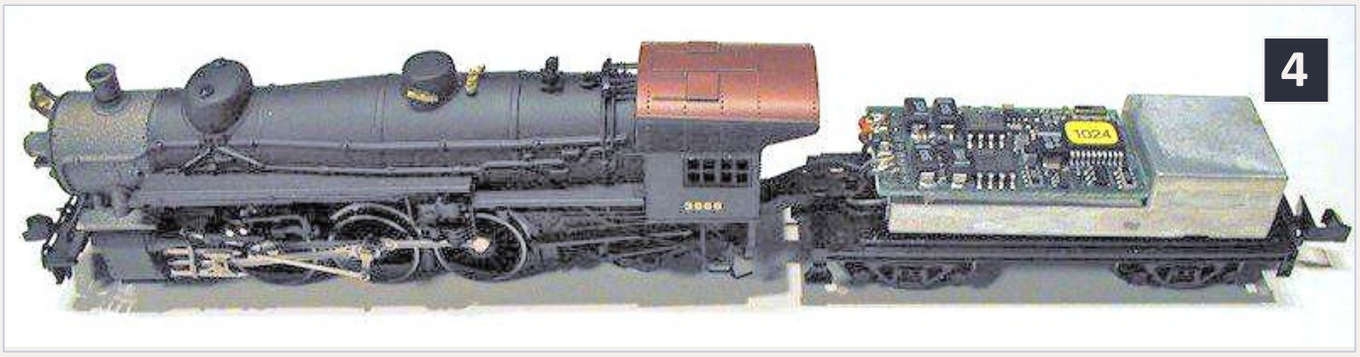
I gave them was for the N-scale version of that locomotive. I asked what N-scale sized decoder to use. There were a bunch of “hand over the microphone” questions flying around in Philadelphia. The tech support person came back on the line and said that there was no decoder available for that loco. I again pointed out that their box said, "DCC-Ready." The reply has me laughing to this day: “Well, it is READY for you to put a decoder into it.”

Okay, on that basis, every locomotive ever made is "DCC-Ready."

My definition is a bit less inclusive. I feel that a customer has the right to expect a loco sold as "DCC-Ready." to have a socket in it that will accept decoders manufactured by more than one company. Once the decoder is plugged in, the loco will function without loss of lighting functions or control. Converting the loco to DCC by plugging in the decoder should not increase the risk of damage to the loco. Likewise the resulting installation should not risk damage to the decoder.

Someone with no electronic experience should be able to remove a couple of screws, remove the shell, remove a connector and plug in a decoder that is available from many

3: Digitrax DN163PS decoder installed in an Atlas C424.



4: Model Power N-scale steamer has room for an HO-sized decoder.

manufacturers. If a loco, marketed as "DCC-Ready," fails this test, it belongs in either the "DCC-Aware" category or the “DCC Ignorant” category.

Figure 2 shows the Athearn Ready-to-Run light board (outside of a loco). Once you remove the shell, you see this on top of the motor. You simply remove the (white) JST plug and adapter board and plug in the JST decoder of your choosing. Almost every DCC manufacturer makes JST (9-pin) connectored decoders.

Another example of truly "DCC-Ready" is the Atlas C424 in figure 3. After removing the shell, installation is simply a matter of plugging the decoder into the NEM-652 (8-pin) socket.

DCC-Aware

The next level is what I call "DCC-Aware." By this term I mean that the manufacturer was aware of the needs of DCC and designed their product for easy decoder instalation.

Things like easy access to the wiring and total motor isolation go a long way toward filling this bill. Isolated light wiring helps, too. NMRA DCC color code compliance is the icing on the cake.

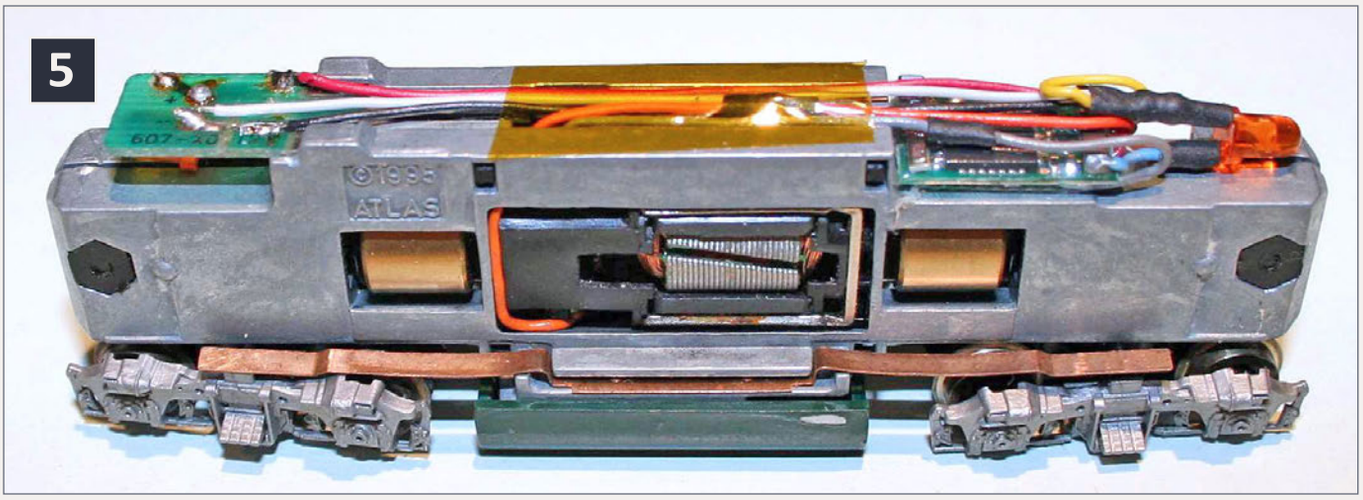
For example, I rate the N-scale Model Power steamers released about 8 years ago about 80% DCC-Aware. Figure 4 shows a Lenz (HO-scale) LE1024W decoder installed in one of these locos. They have an easy to remove tender shell. Inside, there is enough room for many different N- and Z-scale decoders. They even have NMRA color coded wires for the motor and track connections. All one need to do is clip the splices off and wire the decoder, matching the colors. Why do I say 80%? Well, you may have noted that I didn't mention lighting wires. The headlight is wired to the track pickup in the loco. To add on/off capability for the headlight requires extensive disassembly of the loco itself.

I expect that locos in this category require a bit of disassembly and soldering to install a decoder and make the lights work on DCC.

DCC-Ignorant

I can come up with many examples of locos that were designed without a clue about DCC. In all fairness, many of them were designed before the NMRA embraced the Lenz-patented DCC. However, command control systems that need to be inserted between the power pick-up and the motors have been around since the 1980s. So, while the designers of "DCC-Ignorant" locos may get a bit of forgiveness, there is no absolution for them.

Most prevalent of the "DCC-Ignorant" locos are the split frame designs. Here, each half the frame is connected to a rail and the motor is cradled between the halves, making contact with both. This design is reliable and cost-effective, just a pain to put a decoder into. Add to the mix the fact that these are frequently small locos, like N-scale or HO scale switchers, and the installation gets even more difficult.



5: Atlas N-scale GP9 with a Lenz LE0521 decoder.

Figure 5 shows a 1995-vintage Atlas N-scale locomotive. I was most successful using DCC-Ready frames (aztectrains.com/dccframes.html) from Aztec Manufacturing. This involved breaking the loco down to the two pieces of metal that make up the frame. These two pieces get sent to Aztec, where they are exchanged for pre-machined parts that they stock. The loco is then rebuilt from the ground up. This makes for a very complicated installation, and adds time and money to the process.

Where there is an issue, the market builds a solution. With smaller electronic parts, TCS designed their CN series decoders to replace the light boards on both ends of many N-scale diesel locos. This removes the need for machining the frame, but still requires that the loco be completely disassembled to isolate the motor from the split frame. Figure 6 shows one such installation in an Atlas RS3.

The Kato HO-scale NW2 is a prime example of one designed before DCC became popular. The installation of sound in this loco was the subject of my January column (model-railroad-hobbyist.com/magazine/mrh-2013-01-jan/di_dcc-sound) and a companion video.

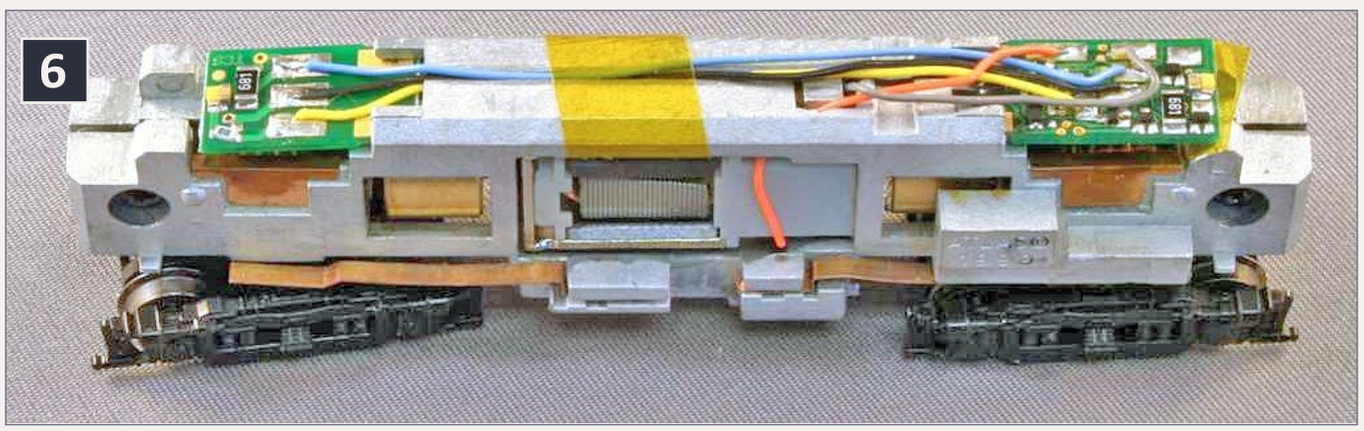
An example of a loco that is marketed as "DCC-Ready" that should be "DCC-Ignorant," in my mind, is the Life-Like Proto 2000 HO-scale S1. Later runs of this loco had a DCC socket.

You can see (7) this series of loco as delivered. It has a socket, all right, but precious little little room for a decoder. The light bulbs are 1.5 volt, so if you plug a decoder in without changing them, their life will be a fraction of a second. Also, the orange motor lead is routed through the frame to the bottom brush on the motor. You may find a decoder that will fit and plug in. However, if the frame ever touches an energized rail you will probably blow the decoder.

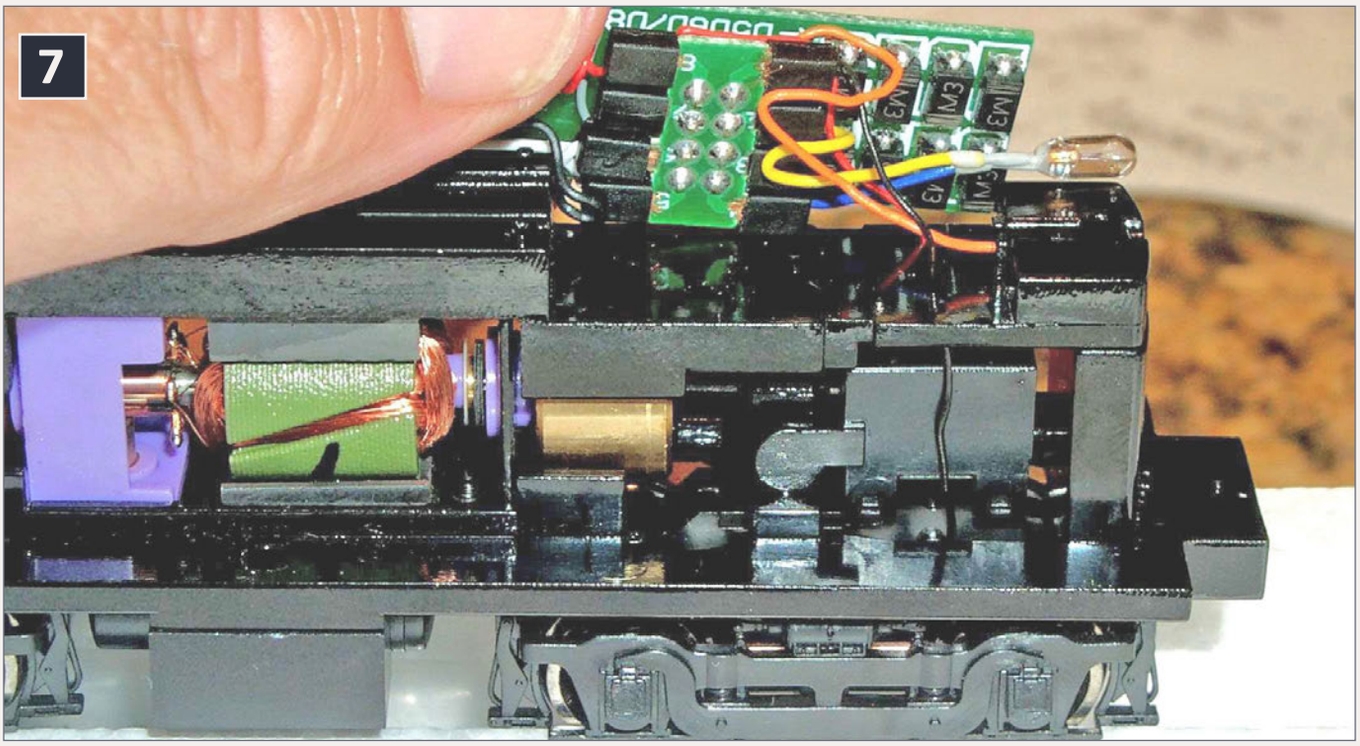
My solution is to tear everything out, insulate the motor (8) and hard-wire a decoder and two LEDs. Somehow, this makes their "DCC-Ready," claim seem humorous. Unless it is you, the one stuck with the loco, and you don't want to do that much work.

Sound installation

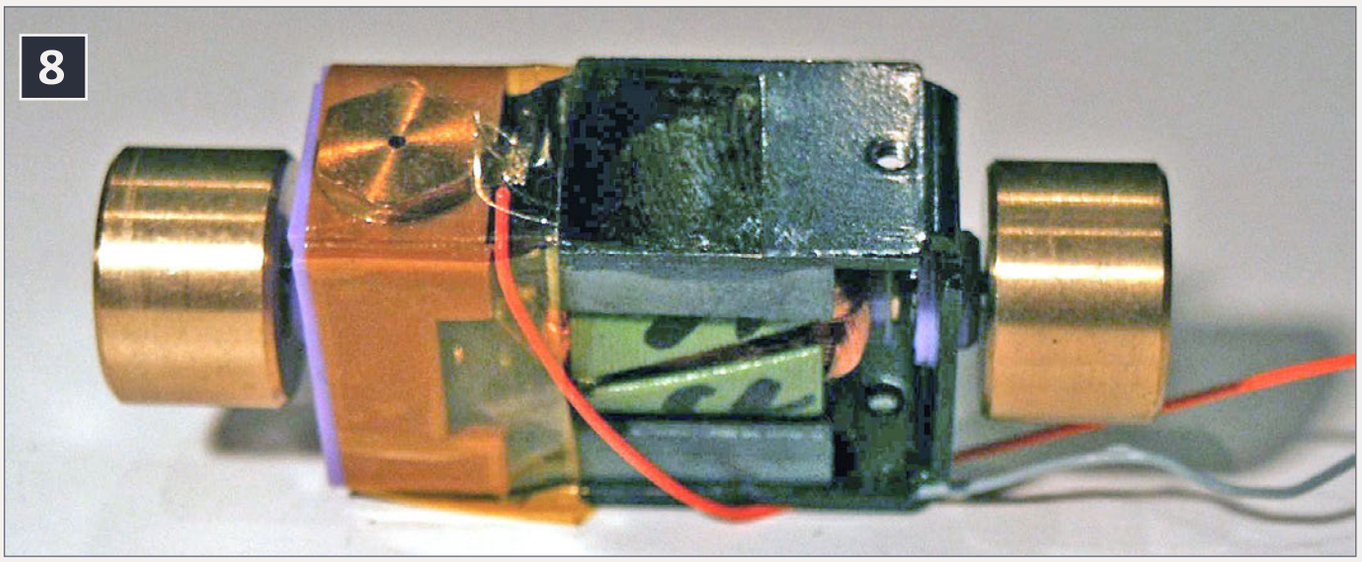
I find that most locomotives are not "DCC-Ready" for sound installations. Usually there isn't enough room for a socketed decoder and a speaker, and still be able to get the sound out. See my August 2012 column (model-railroad-hobbyist.com/magazine/mrh-2012-08-aug/dcc_impulses). Sound installations seem to fall somewhere between "DCC-Aware" and "DCC-Ignorant."



6: TCS CN decoders overcome some of the ignorance.



7: Life-Like Proto 2000 S1 (HO-scale) light board and DCC socket.



8: Life-Like Proto 2000 S1 (HO-scale) motor after insulation – bottom view.

What can you do to protect yourself?

My primary recommendation is to deal with a DCC-savvy dealer. If you have one, rely on their recommendations. Tell them what your end goal is (DCC, sound, etc.). Follow their

recommendations. If they steer you wrong, they should be willing to make things right. If your dealer isn't DCC-savvy, then you need to be, or take a friend who is. Get them to open a loco before you purchase it. Check it out. Look for: DCC socket, room for decoder, and LEDs. These usually mean that you can plug a decoder in and go.

Swap meets

You are never certain what you get at a swap meet, unless you know the seller very well.

Be aware of locos that already have decoders installed. Who did the installation and what were their workmanship standards? If it isn't a very recently relelased locomotive, what generation of decoder is installed? Decoders evolve. Three-year-old decoders are frequently not on par with current offerings.

Hopefully, this will help folks better understand what to look for when purchasing a locomotive. If you liked this column, please click on the Reader Feedback link here and rate it awesome. Please join in the conversation that invaribly develops there about the topics presented in the column.

Share your experiences. I expect this column to generate some lively discussions there. Thanks.

Until next month, I wish you green boards. ☑

... Article continues here ➔

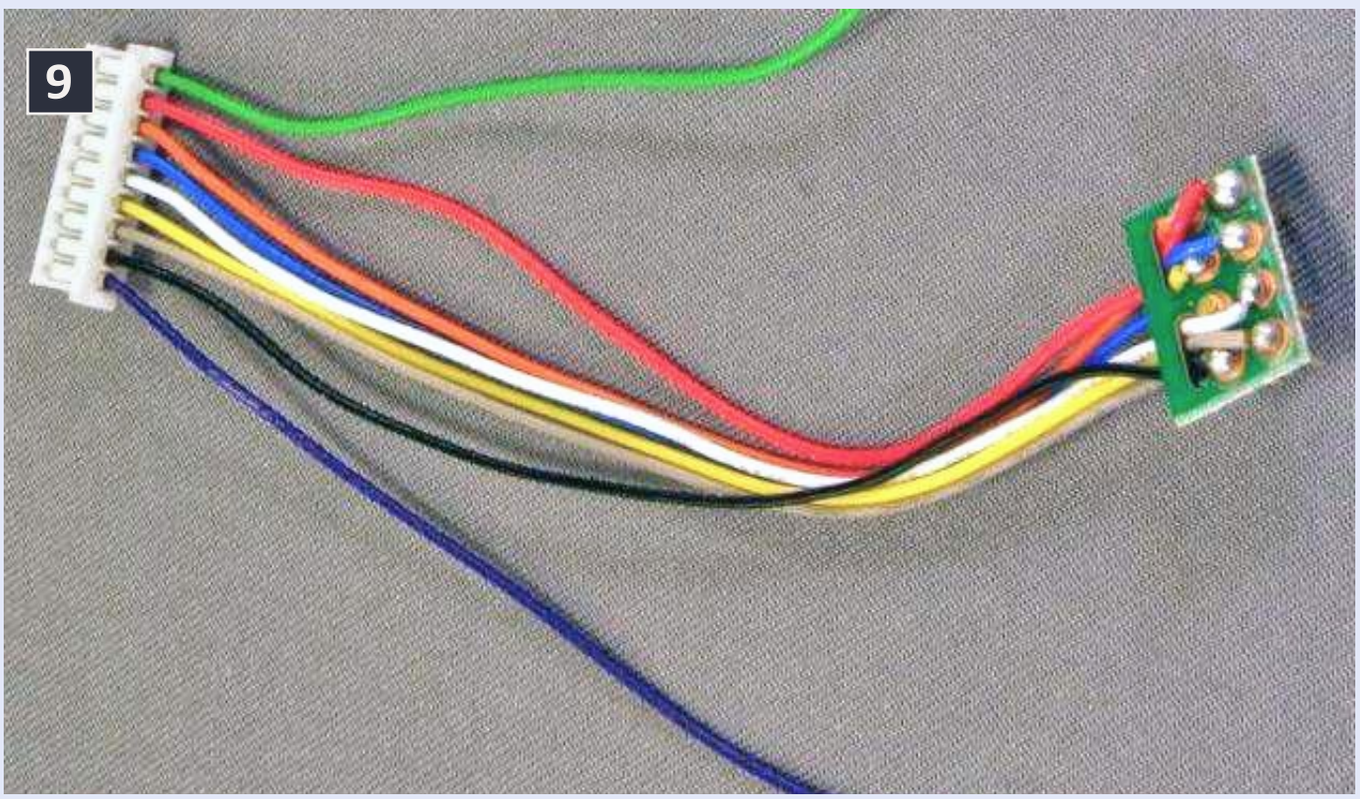
From Mr. DCC's workbench
– Adding an 8-pin Harness to a JST-style Decoder

Okay, you have a locomotive with an 8-pin socket and a decoder with the 9-pin JST wiring harness. How do you install the decoder easily?

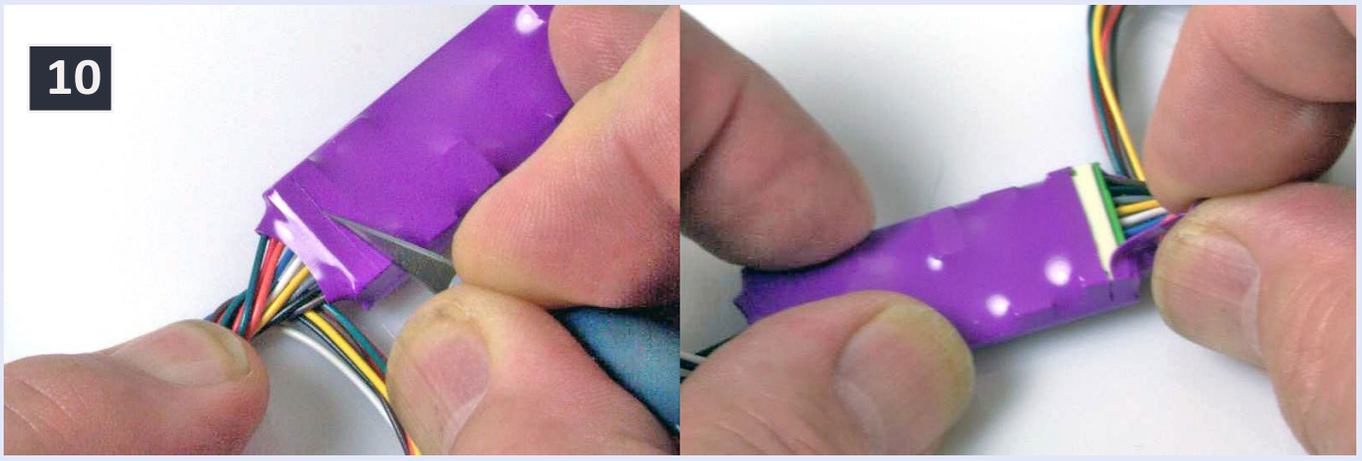
The easiest answer is use a conversion harness of the minimum length needed to make your installation. Several manufacturers make these harnesses in a variety of lenghs from fractions of an inch to several inches.

That's fine, but what if your decoder, such as the SoundTraxx Tsunami TSU-1000, has shrink-wrap over the JST socket? Carefully remove the shrink-wrap (10) and unplug the JST harness. Plug in the JST to NEM-652 harness of the appropriate length.

Figure 10 details the steps to remove the heat-shrink tubing. Working from the connector side of the decoder, not the flat



9: JST to NEM-652 conversion harness (9-pin to 8-pin).



10: JST to NEM-652 harness (9-pin to 8-pin).

side, carefully cut into the shrink in the middle of the JST connector. Then peel the heatshrink back, being careful not to dislodge the heat sink (if there is one).

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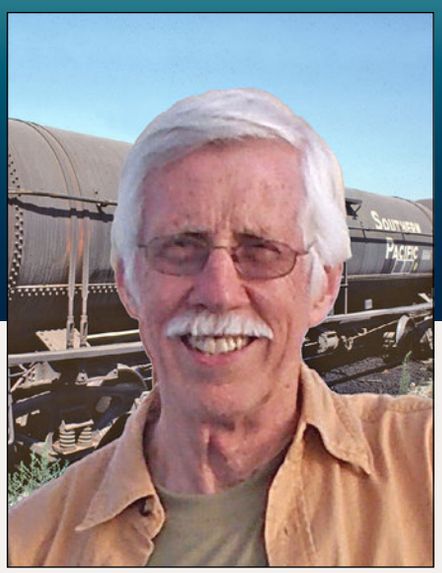


Modeling “signature” freight cars

A place to build realistic models

Reader Feedback
(click here)

Getting Real column

by Tony Thompson

Examples of choosing models that are both significant and interesting ...

The topic I address in this column is the selection of model freight cars which are from “foreign” railroads, that is, owned by railroads other than the home road you model. How should they be chosen? You can of course choose whatever you want. But can the choices be made in a prototypical and still interesting (and fun) way? I think the answer is yes. My approach is based on choosing those foreign cars as “signature” freight cars.

What is a “signature” freight car? The term is sometimes used for unique cars of a particular railroad, such as the famous Milwaukee Road rib-side boxcars, but to me the meaning is broader than that. I use the term “signature” to mean a freight car which is *characteristic* of its owning railroad, meaning that it is reasonably distinctive, and is a car of which the owner’s roster contained a relatively large number. Unique cars can certainly qualify, but, to extend the Milwaukee example, so

would the USRA (United States Railway Administration) single-sheathed boxcars owned by the Milwaukee; they owned 4000 of them, out of a total production of 25,000 of those boxcars built under the USRA. These USRA cars were a dominant part of the Milwaukee fleet for years.

The foregoing comments illustrate the kind of evaluation I like to do in choosing model freight cars for railroads other than my "home road," Southern Pacific, in the early 1950s. In what follows, I will describe single cars or pairs of cars, which I have chosen for their signature qualities, owned by various railroads other than SP, and show the HO scale models which correspond. As part of the description, I will also allude to sources of information you can use to understand these cars. My choices are of course personal, but with information resources like these, you can make your own selections.

"An important part of these foreign car selections is the idea that most railroads would be represented everywhere in the country ..."

An important part of these foreign car selections is the idea that most railroads would be represented everywhere in the country in proportion to the relative size of their fleet of freight cars. This idea was developed by Tim Gilbert and Dave Nelson. I presented that idea in my "Getting Real" column in *Model Railroad Hobbyist,* for December 2011, page 33 (issuu.com/mr-hobbyist/docs/mrh11-12-dec2011-ol?viewMode=presentation&mode=embed). Accordingly, I have approximately scaled my selections in this column to the freight car fleet sizes shown in Figure 1 of that column. These fleet sizes all reflect removal of hopper, ore and ballast car numbers from total fleet size, since in general those car types are interchanged much less than other freight cars, particularly so for western roads.

One important source of information about prototype freight cars is the *Official Railway Equipment Register*, or ORER, issued monthly before the Depression and quarterly since that time. Copies from various years can often be obtained from sellers of railroadiana and railroad paper, but another source is the National Model Railroad Association (NMRA), which has reprinted the January issues for 1943 and 1953. Both are sometimes obtainable from used booksellers online, and the 1953 issue is still available from NMRA. Some libraries also hold ORER issues. Wherever you find ORERs, the point is that the exact size and makeup of each railroad's freight car fleet is shown in each ORER issue.

I have omitted from this column some of the largest and most familiar railroads, such as Santa Fe, New York Central, and Pennsylvania (three of the four largest American freight car fleets), just because these roads are generally so well known, although cars from each of them naturally are well represented in my own freight car fleet. The roads emphasized in this column are generally less well known and, I think, less appreciated. I have also left out the Southern Pacific, which is the home road for my layout, and the fourth member of the top four.

"One important source of information about prototype freight cars is the Official Railway Equipment Register ..."

Since I have already mentioned the Milwaukee Road as an example, I will begin there. The Milwaukee Road owned a large fleet of non-hopper freight cars, in fact the fifth largest of all U.S. railroads (as I showed in my December 2011 column).

But many modelers seem to have a blind spot about the Milwaukee. I have chosen two models as signature cars of the Milwaukee, which are the two cars already mentioned. One is a USRA single-sheathed boxcar, and the other is one of the famous rib-side design boxcars.

Many railroads owned some USRA boxcars, but the Milwaukee was the second-largest owner, trailing only the Pennsylvania, so the Milwaukee cars were certainly significant. Moreover, unlike most other owners, the Milwaukee left their USRA cars with wood sheathing into the transition era. Information on the entire spectrum of USRA freight cars is clearly summarized and explained in an article by James E. Lane in the Railway & Locomotive Historical Society journal, *Railroad History* (No. 128, Spring 1973, pages 5–33). Much additional photography of the boxcars is available in Pat Wider's article for *Railway Prototype Cyclopedia* (Vol. 17, 2008, pages 1–51). The Milwaukee's 4000 USRA cars were numbered from 700000 to 703999, constructed by three different builders in 1919. My model is from a Tichy styrene kit (1).

1: This example of a Milwaukee Road USRA boxcar, one of 4000 such cars purchased by the Milwaukee, is a Tichy styrene product.

2

2: The Milwaukee Road owned quite a few 40-foot and 50-foot versions of their distinctive rib-side boxcars, of which this model represents just one example. It is a product of Rib Side Cars, in a ready-to-run styrene form.

For the justly-famous Milwaukee rib-side boxcars, there is a comprehensive and profusely illustrated article by Pat Wider in *Railway Prototype Cyclopedia* (Vol. 13, 2006, pages 1–75). These cars were built over a span from 1937 to 1950. Ultimately, the Milwaukee would build over 12,000 box and automobile cars with this distinctive rib-side design. My model, a Rib Side Cars version of the most common 40-foot cars, is MILW 23145, is from a group of 1000 cars built at Milwaukee shops in 1945, numbered 22188–23187 (2).

Another pair of boxcars I've chosen is from the Baltimore & Ohio. The B&O owned the sixth largest non-hopper freight car fleet in 1950, right behind the Milwaukee Road, as shown in that December 2011 column. The B&O built a series of box cars called "wagon top" cars, a unique design to the B&O, in

their way every bit as distinctive and unique as the Milwaukee rib-side cars. There is a fine article by Pat Wider about the wagon tops, in *Railway Prototype Cyclopedia* (Vol. 9, 2003, pages 1–25). Recently ExactRail has produced a superb model of a Class M-53 car, as shown here. This class was not the only wagon-top class, but was among nearly 5000 cars of this design built by B&O (3).

But the largest single class of B&O boxcars was the M-26 class, very similar in design and execution to the Pennsylvania X29 boxcar. Like the X29, the B&O M-26 cars were essentially built to the 1923 American Railway Association proposed standard all-steel boxcar. There were some 14,000 cars in six distinct sub-classes, a major group of boxcars for any railroad. A fine

3: My two signature Baltimore & Ohio boxcars are seen here together, the one on the left the M-26, one of more than 14,000 cars of that type, and on the right, the famous "wagon-top" class M-53. Both models are injection-molded styrene, and are from Red Caboose on the left, ExactRail on the right.

4: A vitally important D&RGW boxcar group, cars 66000–67499, remained a central part of the railroad's fleet of boxcars into the 1950s. This one was built from a Westerfield resin kit, with Kadee Vulcan trucks.

article about the 1923 car designs is available from Pat Wider, in *Railway Prototype Cyclopedia* (Vol. 18, 2009, pages 1–113), with an entire section within that article about just the B&O M-26 cars (pages 61–79). My model is a Red Caboose styrene kit, lettered with Speedwitch decal set D117.1, which is especially for M-26 cars, including subclasses A, B and C. Mine is numbered within the M-26 car series 265000–266999, built by Pullman in 1925. The trucks, doors, AB brakes, and lettering represent replacements in later years. Of the original 2000 M-26 cars, 1952 cars were still in service in 1951.

Not every set of signature cars need be entirely boxcars. Denver & Rio Grande Western was a railroad with a fleet smaller than most of the roads described in this column, with

only 11,000 total freight cars in 1953. For the D&RGW, I chose a boxcar and a general-service gondola. The boxcar is an early single-sheathed design, built by Pullman in 1916, an order of 1500 cars in the number series 66000–67499. These cars were still prominent in the D&RGW fleet after World War II, with 986 cars still in service in 1953, even though they were almost 40 years old. This model was built by Dennis Williams from Westerfield kit 6453, with lettering and finishing by me (4).

The gondola is one of D&RGW's distinctive general-service (GS) or drop-bottom gondolas with 46-foot inside length, setting it apart from the numerous 40-foot GS gondolas owned by many other railroads. A group of 700 cars were

5: The distinctive 46-foot D&RGW gondola fleet, all drop-bottom or GS cars, is represented by this brass model from W&R Enterprises. The correct clasp-brake trucks with outside brake hangers were provided with the car. The cars were predominantly used in coal service, and Southern Pacific received Utah and Colorado coal in cars like these for domestic stove use in depots, section dwellings, cabooses, and so on.

6: Northern Pacific's massive fleet of double-sheathed cars like this survived in considerable numbers after World War II, and a representative of this car group is essential as a signature car. This one is a Sunshine resin kit.

built by Western Steel Car & Foundry in 1922, numbered 70000–70699. Fully 675 of them were still in service in 1953. Published information about these cars is sparse, but one source is Jim Eager's book, *Color Guide to D&RGW Freight and Passenger Equipment* (Morning Sun Books, 1996, page 76). Jim also wrote an article including these cars for the Rio Grande Modeling and Historical Society magazine, *The Prospector* (Vol. 1, No. 2, 2002) if you can find a copy (5).

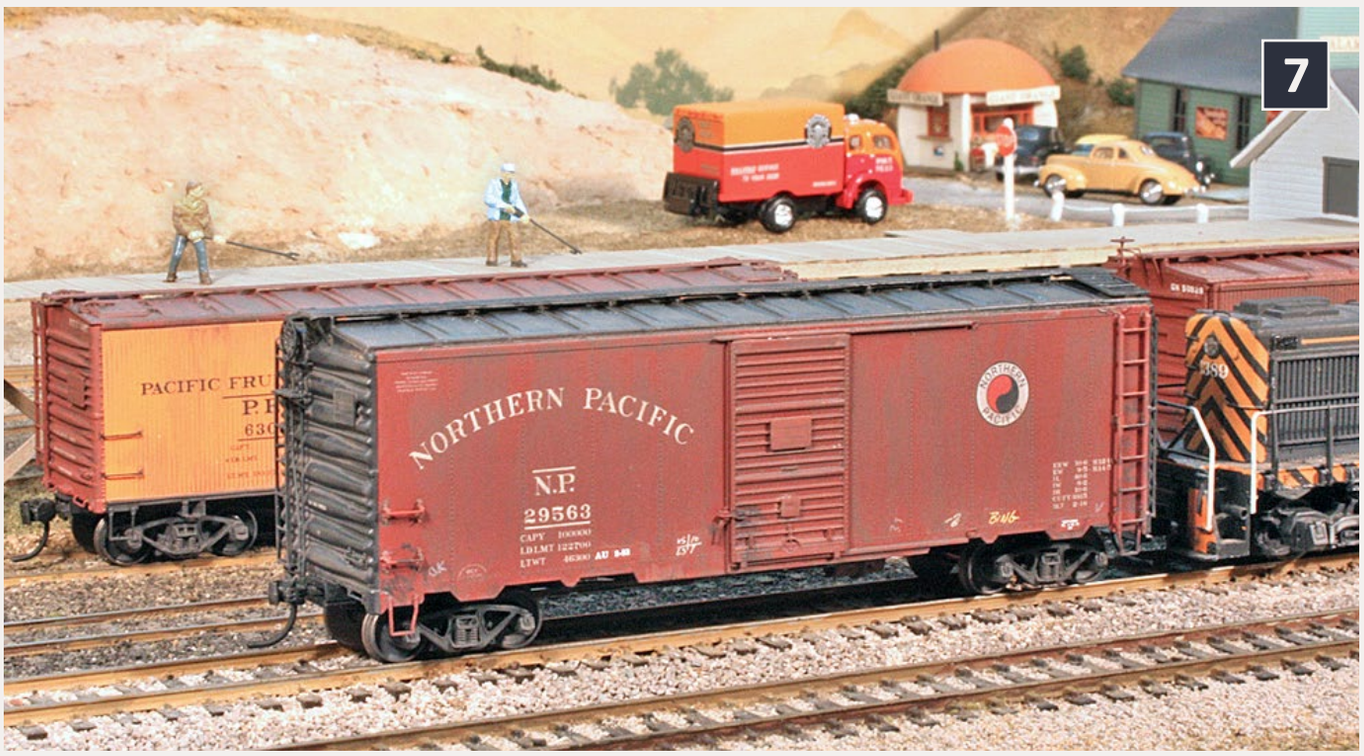
My model is a brass car from W&R Enterprises. I tend not to purchase brass freight cars, but when a desirable prototype has only been done in brass, as in this case, I make an exception. This car is a good example of a prototype too rare to be likely in styrene, and difficult to cast in resin, so brass is an excellent medium. And this model illustrates W&R's well-deserved reputation for

accuracy and quality. I did add a route card board to the right of each car side, using scale 1 x 6-inch styrene, as well as Kadee No. 58 couplers. Otherwise the model is pretty much as-delivered, with weathering added. It is shown with a coal load.

A railroad of particular importance for SP modelers like me is the Northern Pacific, with which SP enjoyed a warm and cooperative connection at Portland, Oregon. My NP fleet is not limited to two cars, but I will show here two signature boxcars. One is from NP's massive fleet of virtually-identical 40-foot, double-sheathed cars, numbered 10000–13999 and remaining in service for many years. In the year I model, 1953, the original group of 4000 cars still contained 3809 cars! The first 3000 cars were built in 1923, 30 years earlier, and like so many NP house cars in that era, had the railroad's own design of metal-sheathed "circular" or radial roof. Published coverage of these cars includes Todd Sullivan's book, *NP Color Guide to Freight and Passenger Equipment* (Morning Sun Books, 1995). My model is from Sunshine resin kit 52.2, built by Dennis Williams and lettered and finished by me (6).

"A railroad of particular importance for SP modelers like me is the Northern Pacific ..."

The Northern Pacific continued to buy thousands of new box cars of all-steel construction, a substantial number before World War II of the 1937 AAR design, and many more after the war, which in appearance were largely conventional. Among them were the 500 cars obtained from American Car & Foundry in 1946, equipped with Improved Dreadnaught ends and numbered 29500–29999, the number group to which the model I built belongs. Fully 495 of these cars remained in



7: This example of a Northern Pacific postwar boxcar has the black roof and ends typical of practice at that time, and is being spotted in a switching move. It was built from a Branchline styrene kit.

service in 1953. Considerable information about the entire NP freight car fleet exists in a chapter by Richard Hendrickson, to be published in a forthcoming book by Patrick Dorin, entitled *Northern Pacific Lines East.* My postwar NP car was built from a Branchline kit (7).

I've also chosen a pair of Seaboard Air Line boxcars for my fleet. One of them is an example of the 1932 ARA design, of which Seaboard was the second biggest buyer. The complete story of the 1932 boxcars is told in Ted Culotta's book, *The American Railway Association Standard Box Car of 1932* (Speedwitch Media, 2004). Seaboard's purchase of 2000 of these cars, numbered 17000–18999, was second only to the Missouri Pacific (and subsidiaries). The Seaboard cars are an interesting variation of the 1932 design, because the railroad

chose to specify the flat steel ends and roof characteristic of the 1923 ARA steel-car design. Atlas recently produced a ready-to-run version of all the 1932 ARA cars, including the correct body for the Seaboard cars. I painted and decaled one of these cars to obtain the best possible lettering, using the Speedwitch Media decal set D103 (8).

The second car is a Pullman-Standard PS-1 car, probably the most heavily-purchased postwar design. In March of 1952, Seaboard received 500 of these cars, numbered 25000–25499, and among their noteworthy features was an eight-foot door opening, contrasting with the then-standard six-foot door. These cars are described in Edward S. Kaminski's book,

8: This model portrays the Seaboard's version of the 1932 ARA all-steel boxcar. The car carries the road's "Orange Blossom Special" lettering and the plain railroad medallion. It is a repainted Atlas styrene model with decal lettering, an Ajax brake wheel, and a replacement wood running board.

9: The 1952 order of PS-1 boxcars by Seaboard included an 8-foot door, at the time an unusually large door opening. By this time, Seaboard had introduced the red heart in the railroad medallion. The model is a Kadee car, repainted and with decal lettering.

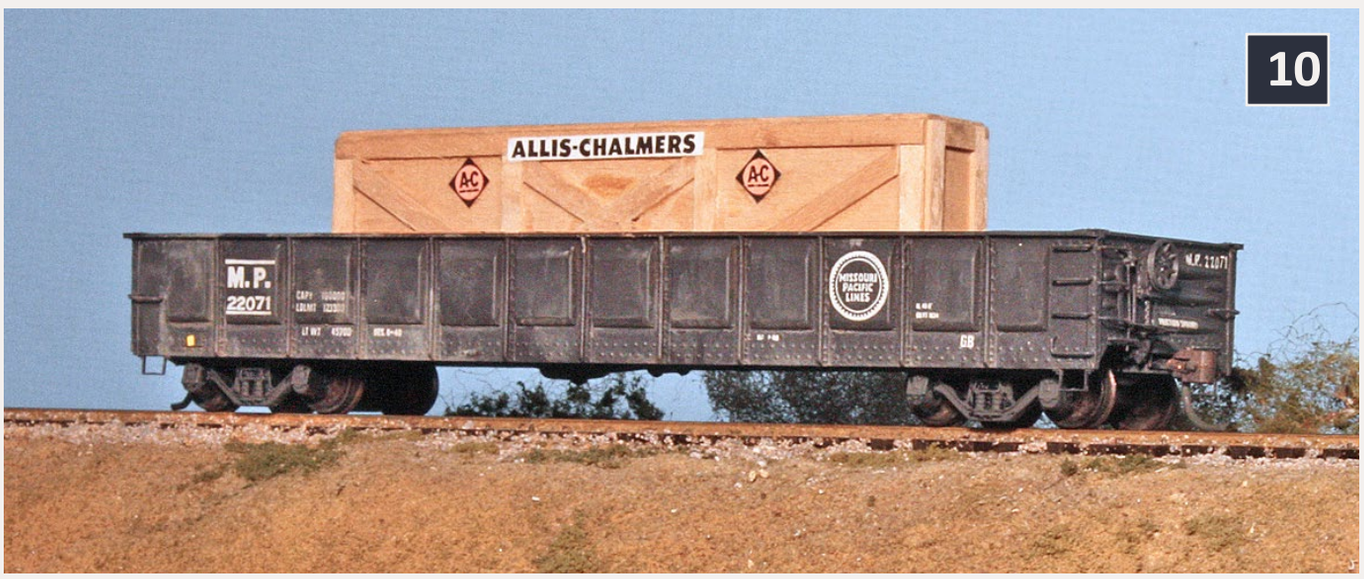
Pullman-Standard Freight Cars, 1900–1960 (Signature Press, 2007, page 68). I used a ready-to-run Kadee PS-1 car for this, but repainted it and decaled it myself, with the same Speedwitch decal set, D103. The slogan on these cars was "The Route of Courteous Service (9)."

The Seaboard is a good example of a railroad for which there are other, equivalently good choices for signature cars, such as the distinctive round-roof boxcars in Seaboard's Class B-7 (and the automobile cars in classes AF-1 and AF-2). As I've already stated, the choices described in this column are my personal ones, and I would never claim that everyone should chose the same ones. As a modeler learns more about the signature freight cars of railroads other than his home road, the selection of cars to model

becomes broader, and also more focused on exactly which choices are most distinctive or attractive to model.

Another railroad that had one of the largest freight car fleets was the Missouri Pacific Lines, seventh overall in my ranking of non-hopper freight fleets. And in this case, as with the D&RGW, I have chosen a gondola as well as a boxcar for a pair of signature cars. The gondola is a distinctive design for two reasons: the inside length is 45 feet, and the sides have raised panels to increase somewhat the cubic capacity (10).

During 1937 to 1942, Pressed Steel Car and Mt. Vernon delivered 2400 of these cars to Mopac and its subsidiaries. The subsidiary lines included the International-Great Northern, Missouri-Illinois, and St. Louis, Brownsville & Mexico. But the majority of the cars, 1775, went to Missouri Pacific itself, and were numbered 22000–23774. In 1948, the railroad's DeSoto, Missouri shops built 1000 more of these 45-foot cars, though this time with smooth side panels.



10: A model of the distinctive Missouri Pacific panel-side gondolas, 45 feet long, of which 2400 were built and nearly all of which remained in service in 1953. The model is from a Sunshine resin kit. The machinery crate load is scratchbuilt.

11: This car represents one of more than 3200 box cars of 1932 ARA standard design owned by Missouri Pacific and subsidiaries (in this case, International-Great Northern or I-GN). At the time these cars were built, Missouri Pacific painted placard boards black. The model is an Atlas ready-to-run car.

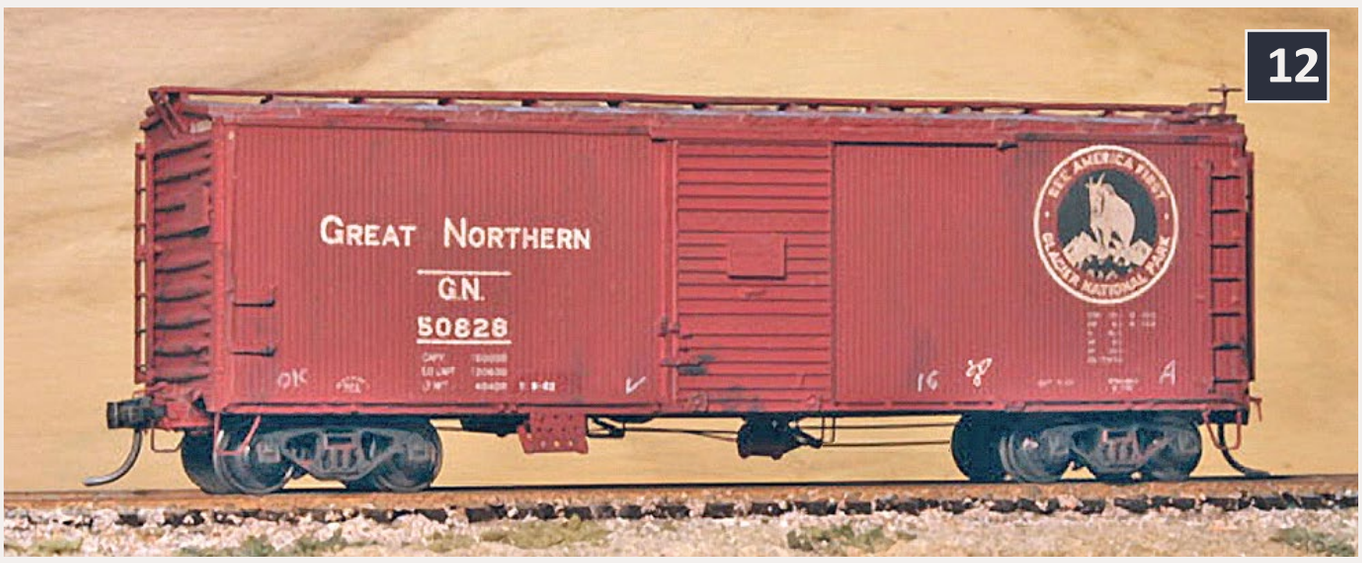
By 1953, most of these cars remained in service and were a prominent part of the Mopac gondola fleet. Though Mopac rostered only 14% gondolas, compared to a national average of 20%, these 45-foot cars nevertheless amounted to more than a third of all Mopac gondolas in 1953. Combined with its distinctive panel-side appearance, that makes it a significant car, in my view.

My second choice is one of the ARA 1932 boxcars. Missouri Pacific purchased the largest number of these cars of any railroad, 3250 cars, and given the pivotal importance of this car design in freight car history, it seemed an unavoidable choice as a signature car for Mopac. As already mentioned for the 1932 ARA design, the best and most complete source is *The American Railway Association Standard Box Car of 1932*

(Speedwitch Media, 2004) by Ted Culotta. On the Missouri Pacific, by 1953 almost 3100 of the original 3250 cars remained in service (11).

For the gondola model, I used Sunshine kit 1.1 (their very first kit), which I reviewed back in January of 1990 for *Railroad Model Craftsman* (Vol. 58, No. 8, pages 104–109), and in that review I described the construction process. I used Athearn AAR trucks and Kadee couplers and wheelsets.

The 1932 ARA boxcar design with Dreadnaught ends is well-represented by the Atlas styrene model. The one I acquired was lettered for International-Great Northern, from the first group purchased by Mopac. The I-GN cars were numbered 17001–17300, and were built by American Car & Foundry in 1936. I added weathering, chalk marks, and route cards to this ready-to-run model (11).



12: The Great Northern chose to build its 1937 AAR standard boxcars with tongue-and-groove wood side sheathing. This Sunshine resin model captures all the details of that distinctive car, along with the "front-facing goat" emblem in use when the car was built in 1937.

13: This model of a 12-panel Great Northern boxcar, with a diagonal-panel roof, represents thousands of such cars built by and for GN after World War II. It has Pennsylvania Railroad (off-line) reweigh and repacking data from a Sunshine decal set.

Another road for which I have carefully chosen freight cars is the Great Northern, whose freight car fleet was one of the top 15 in size, as I showed in my Dec. 2011 MRH column. Here I will just mention two. A distinctive and eye-catching part of the GN freight car fleet was the 1937 Association of American Railroads (AAR) design, which GN chose to build with wood side sheathing. My second choice was the postwar 12-panel steel boxcars, of which GN built about 3500 cars.

Information on both of these cars, and many other GN freight cars, is very nicely summarized in a book chapter about GN freight equipment, by Richard Hendrickson and Staffan Ehnbom; that chapter is in Patrick Dorin's book, *Great Northern Lines East* (Signature Press, 2001, Chapter 6). The wood-sheathed AAR cars are described in Pat Wider's article which

appeared in *Railway Prototype Cyclopedia* (Vol. 23, 2011, pages 1–41). Additional information about the postwar 12-panel cars can be found in Pat Wider's earlier article in *Railway Prototype Cyclopedia* (Vol. 8, 2003, pages 75–105). Finally, there is good color coverage of both car groups in Scott Thompson's book, *Great Northern Color Equipment Pictorial,* Book One, Box Cars and Stock Cars (Four Ways West, 1995).

My prewar wood-sheathed car is built from a Sunshine resin kit (kit no. 18.4), and is numbered within the first 1000 cars built in 1937, cars 50000–50999. By 1942, they had been followed by 7000 more cars of equivalent design, thus comprising a major part of the GN fleet. I lettered this car with the older style "front-facing goat" emblem, which these first cars of the series did receive when built (12).

"My prewar wood-sheathed car is built from a Sunshine resin kit ..."

My postwar 12-panel car represents part of the 3500 cars of this design acquired by GN during 1948–1951, specifically series 18000–18499, built in company shops in 1949. Great Northern was a major exponent of the 12-panel design in the years after World War II. My model is an InterMountain styrene kit, to which I added the correct Universal handbrake (not included in the kit) and a Plano etched-metal Morton running board. My kit came with a representation of a Gypsum running board, but this group of cars had either Morton or Apex running boards. Note that this car has the more familiar "side-facing goat" emblem, introduced about 1940 and thus correct for the time of construction of the car (13).

14: Boston & Maine 72597 represents a 40-ton box car, an ARA XM-1 design with plate ends. There were 2000 of these boxcars for this relatively small railroad and they are a good example of a signature freight car. The model was built from a Sunshine resin kit.

An example of a modeling detail on this car: the reweigh place and date shown are “P50,” a Pennsylvania Railroad symbol designating Enola Yard, one of the largest freight yards in the world, and the date, “6-51.” This car was built in early 1949 and like all new cars at that time, would have had to be reweighed in 30 months, thus this choice of reweigh date. Other than new cars, most cars only had to be reweighed every 48 months after January 1, 1949. A written description of reweigh rules is available on Google Drive, through this link: modelingthesp.blogspot.com/2011/03/reweigh-article-from-rmc.html. I usually use Sunshine Models decal sets for reweigh and repacking lettering, from the regional “Repack and Reweigh” sets. The same kind of detail can be seen on all but the newest other cars shown throughout this column.

A relatively small railroad for which I've chosen just one signature car is Boston & Maine. In 1953, their freight roster contained only 5300 cars, although 63% of them were boxcars. My choice was their version of the 1923 ARA XM-1 single-sheathed boxcar, to which they applied plate steel ends, making a distinctive appearance. There were 2000 of these cars, built by Standard Steel Car Company in 1929 and 1930, and they survived well; more than 1900 of them were still in service in 1953. For more information and photos, you can consult Pat Wider's article in *Railway Prototype Cyclopedia* (Vol. 18, 2009, pages 1–113). My model of one of these cars was built from Sunshine resin kit 91.6 (14).

I will conclude with the Illinois Central, another fleet size in the top 15 and a railroad with which the SP had a friendly connection at New Orleans. I have always liked single-sheathed

15: The model, built from a Sunshine resin kit, represents one of 1000 cars built for Illinois Central in 1927. In 1953, 941 of these cars remained in service, though being renumbered to 16000–16975.

16: This Illinois Central model represents a car built for IC in 1939. It began life as an Athearn metal car kit, which was upgraded and relettered to reflect its prototype body style. Fresh numbers for car capacity reflect a reweighing of the car.

boxcars and there were still a great many of them running in the early 1950s. One of my IC cars is such a boxcar, from a 1000-car order built in 1927 with massive fishbelly underframes, steel Dreadnaught ends, and Youngstown steel doors. Their original numbers were 176000–176999. Around World War II, they were renumbered in to the 16000–16975 series, of which 941 remained in service in 1953. These cars are good representatives of the late days of construction of single-sheathed box cars on American railroads (15).

My model of this car was built from Sunshine resin kit 57.2. I acquired it from John Golden, and at some point I will renumber it into the 16000 series. I may do so with the same expedient used by the Illinois Central on some of the cars in this group, to simply paint out the “7” in the car number.

The other IC car I will mention is an upgraded Athearn metal kit from many years ago. I chose it to depict a car from Illinois

Central boxcar series IC 17000–18999, 2000 cars built by American Car & Foundry in 1938–1939. Although generally of 1937 AAR standard design, they differed in having 10 feet, 4 inches inside height instead of 10 feet, and only having 40 tons capacity. I chose to model one particular group in this series, IC 18400–18699, which had AAR trucks. This information, kindly furnished by Richard Hendrickson, comes from the Illinois Central freight diagram book. In 1953, 1971 of the original 2000 cars remained in service.

Those Athearn metal boxcars were pretty good representations of 1937 AAR boxcars, though often factory-lettered for post-war cars, as was this one. I fixed up the running board with wood and repaired a damaged underframe (and added brake rigging), to achieve a more contemporary standard of detail. I added Athearn plastic AAR trucks and Kadee No. 58 couplers. The original Athearn postwar car number and data block was painted out, and I then used Jerry Glow's fine Illinois Central boxcar decals to letter the car for IC 18545 (16).

So there are some of my selections of signature freight cars for some important foreign roads that operate on my layout. Your foreign cars can be anything you want, but I think choosing interesting and significant cars is a way to add interest to your modeling as well as to your layout operation. ☑

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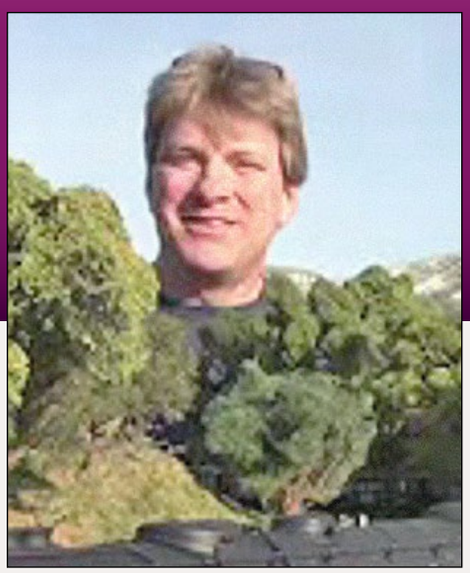

The Railroad Prototype Modelers meet, St Louis 2012

Photos and video of superb models

Reader Feedback
(click here)

What's neat this week column

by Ken Patterson

1: Kim Hornbaker from Farmington, Iowa, caught my eye with wind turbine blades loaded on flatcars, all modeled to represent the prototype. The real blades are manufactured by Siemens in Fort Madison, Iowa, and shipped by rail. Kim makes the blades available for $8 each to other modelers wanting to model this type of shipment. No website, just a phone number to reach Kim, 319-592-3289.

“What’s neat this week” visits the St. Louis RPM meet in July of 2012 ...

More than 1000 custom-finished models filled the display tables at the most recent Railroad Prototype Modelers Meet in St. Louis, Missouri. Seventy manufacturers and vendors had products on display and for sale at the RPM meet, on July 27-28, 2012. The room was alive with the exchange of information among modelers from all walks of life.

With so many talented out-of-town modelers available, I took the opportunity to meet some of them and schedule afternoon photo shoots at my bluff top studio for my "What's neat this week" segments. Both days of the show, and the Sunday and

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back to previous page of text ...

Monday following the show, I shot the weathered freight cars of Butch Eyler, Gary Christensen, and Jeff Meyers outdoors, and then moved to my home layout dioramas to feature their work.

I also shot some of the models at the show on the white tablecloths – with the owners' permission. After gathering plenty of information on their layouts, I took video of the overall room to create this RPM "What's neat this week" segment. That game plan worked out well, and I will seek out additional talent to

2: Keith Hapes from Plano Products brought a large display of hundreds of photo-etched detail parts for freight cars and locomotives.

3: John O'Donnell from Olney, Illinois, shows weathered freight cars by his company, Moondograilcars.com.

set up photo shoots with new modelers at the upcoming 2013 show, with modelers I've yet to meet.

Follow the photos and captions. and watch the video, to experience some of the show right now of the excitement of an RPM meet. ☑

Pictures continue on the following pages ...

Reader Feedback
(click here)

4: RPM attendees brought enough models to cover 75 tables. Many print cards to explain how the models were built, and most owners hang around their displays to answer questions.

5: Craig Haller brought an array of Proto 2000 50-foot boxcars in various Penn Central attire. Scalecoat II paint, Microscale decals, and chalks were used to finish these models.


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CENTRAL
PC
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6: The Bowser N8 caboose is lettered and numbered with Penn Central Historical Society decals. The tractor load is mounted to a Proto 2000 flat with a laser-cut deck. The tractors are by Life-Like. The Proto 2000 and Intermountain gondolas have real scrap metal and styrene to make up the load. These models, along with the Rail Yard Models gondola and boxcar, are all by Craig Haller.

7: Trucks and vehicles are part of the show display. Craig Haller tricked-out Walthers auto carriers with new fuel tanks and wheels painted to match the prototype, and weathered the rigs with chalks.

The cement mixers are Athearn models Craig custom-painted and improved with details that include new tires and fuel tanks.

8: Mike Budde of St. Louis displayed HO and G scale models of fully-loaded tri-level auto racks, and there are more photos of his work in the video. He modeled the wrecked box car from prototype photos.

Reader Feedback
(click here)

Contact Information:

RPM 2012 website with info and links to the 2013 show:

home.mindspring.com/~icg/rpm/stlrpm.htm

John Golden Golden1014@yahoo.com

Lonnie Bathurst Bathurst@litchfieldil.com

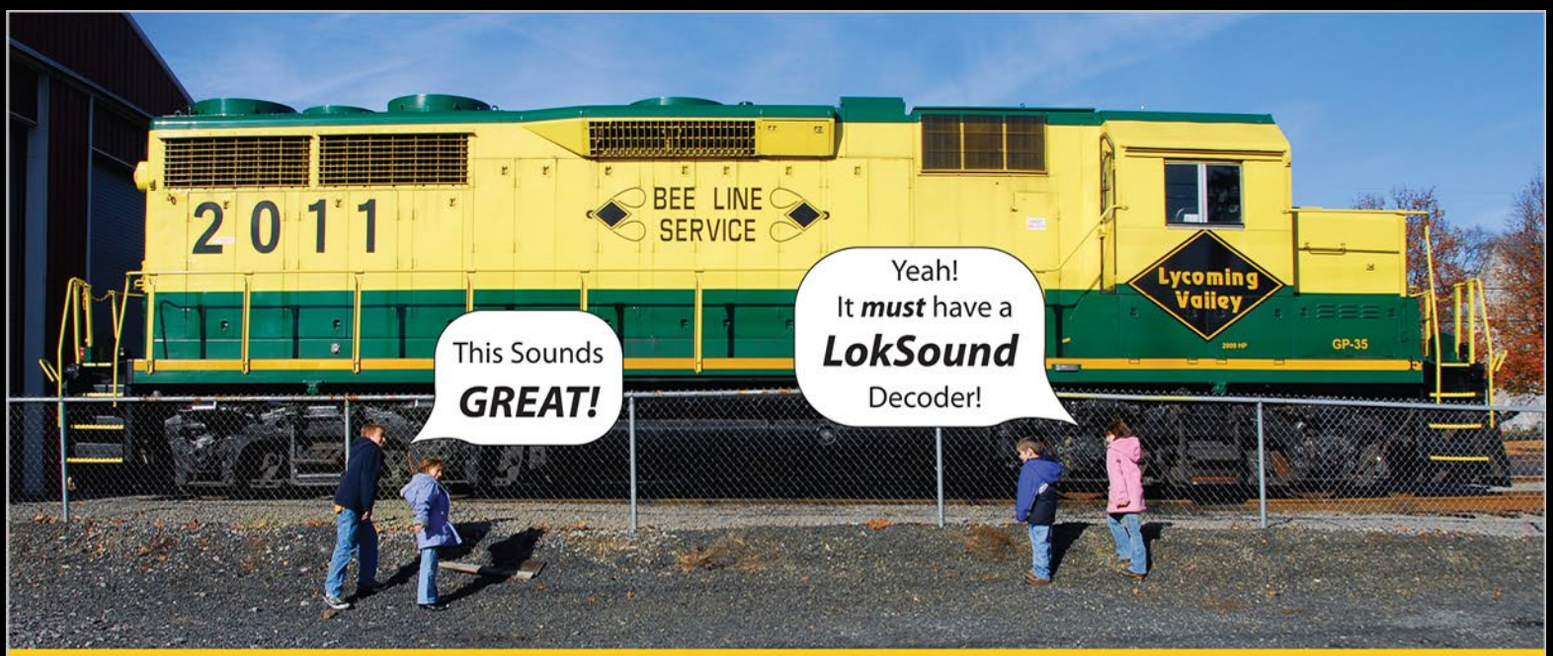
Gateway Center website gatewaycenter.com ■

9: John Golden, above, is a major driving force behind the St. Louis RPM event. He and Lonnie Bathurst are contact persons for the 2013 rpm show, scheduled for August 2-3, 2013 at the Gateway Convention Center in Collinsville, Illinois, just a few minutes from downtown St. Louis.

MRH HOBBY MARKETPLACE - 1

MRH HOBBY MARKETPLACE - 2

MRH HOBBY MARKETPLACE - 3



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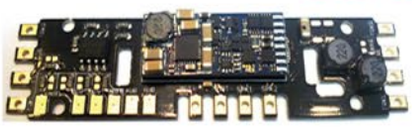

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The Third Hand

How many times have you been building something and realized that it would be nice to have another modeler sitting next to you to hold something in place while you glue or solder it in place?...

by Jack Burgess

Reader Feedback
(click here)

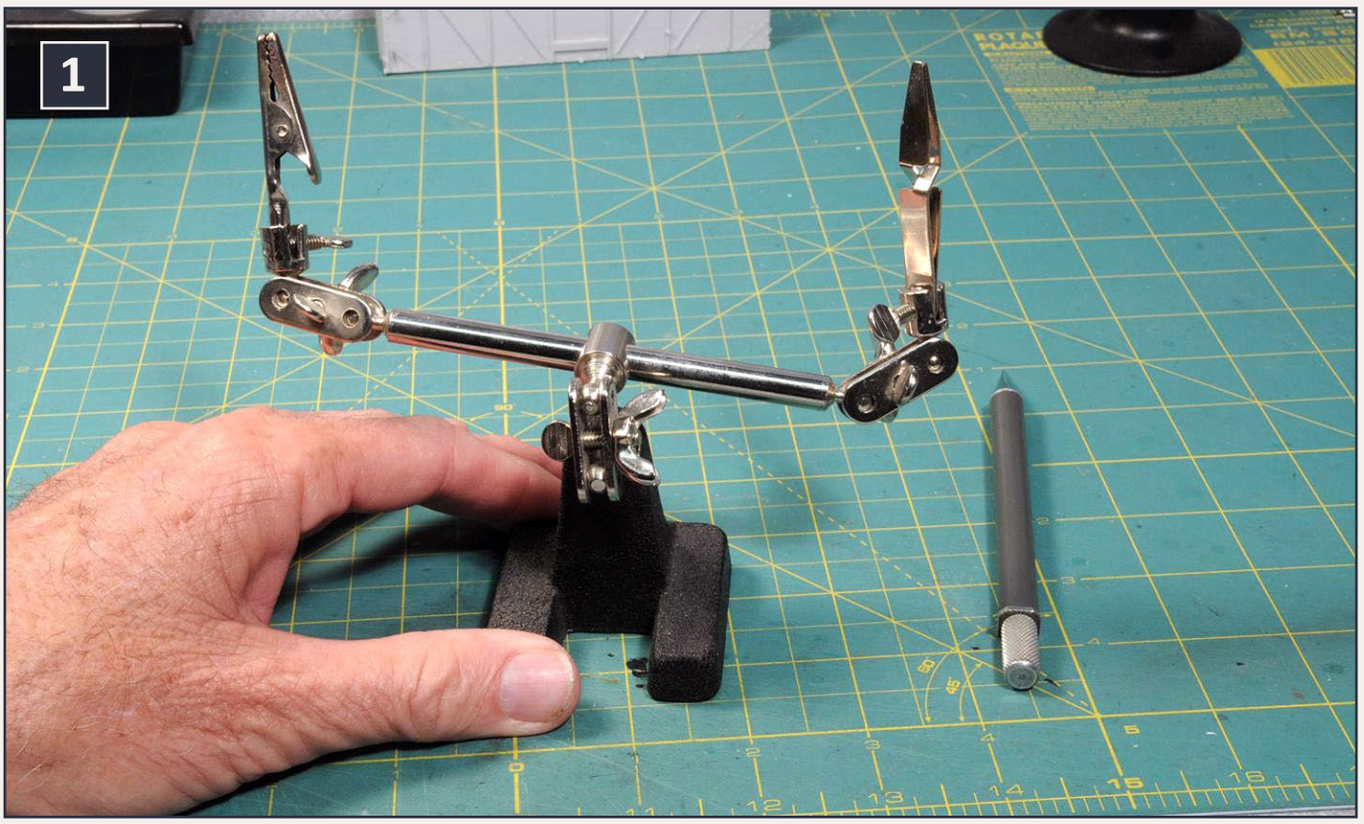
If this has happened to you a few times in the past, you might have purchased an X-Acto Third Hand as I did several years ago.

However, after using it a number of times I realized that this tool had some shortcomings. The main problem is the alligator clips incorporated into it. While they might hold larger objects, they won't hold small parts or thin styrene, brass wire, or stripwood.

Once I realized that, I set out to fix those clips. A friend suggested that I cover the clip faces with shrink tubing. While that seemed a reasonable fix, I decided that rather than trying to fix the existing alligator clips, a better solution might be to replace them completely. I purchased some flat clamps which could also fit in the screw holders in the tool, but the new clamps weren't much better.

Another short-coming with the X-Acto tool are the ball joints. Assuming that you can hold your work in one of the alligator clips, it is difficult to accurately position the alligator clips where you need them for gluing or soldering due to the limitations of this type of joint. If you tighten the wing nuts on the ball joints enough to ensure that the clamps won't accidently move, then it is difficult to move the clamps just a little as is often needed to proper position the item being held.

The Excel Hobby Blades Corp. has a third hand tool which uses self-closing tweezers mounted on a double ball joint assembly. However, the short height of the base can be a limitation in many situations if you need to position the tweezers vertically but with the tip of the tweezers down. In addition, it appears to have the same ball joint design as the Xacto.

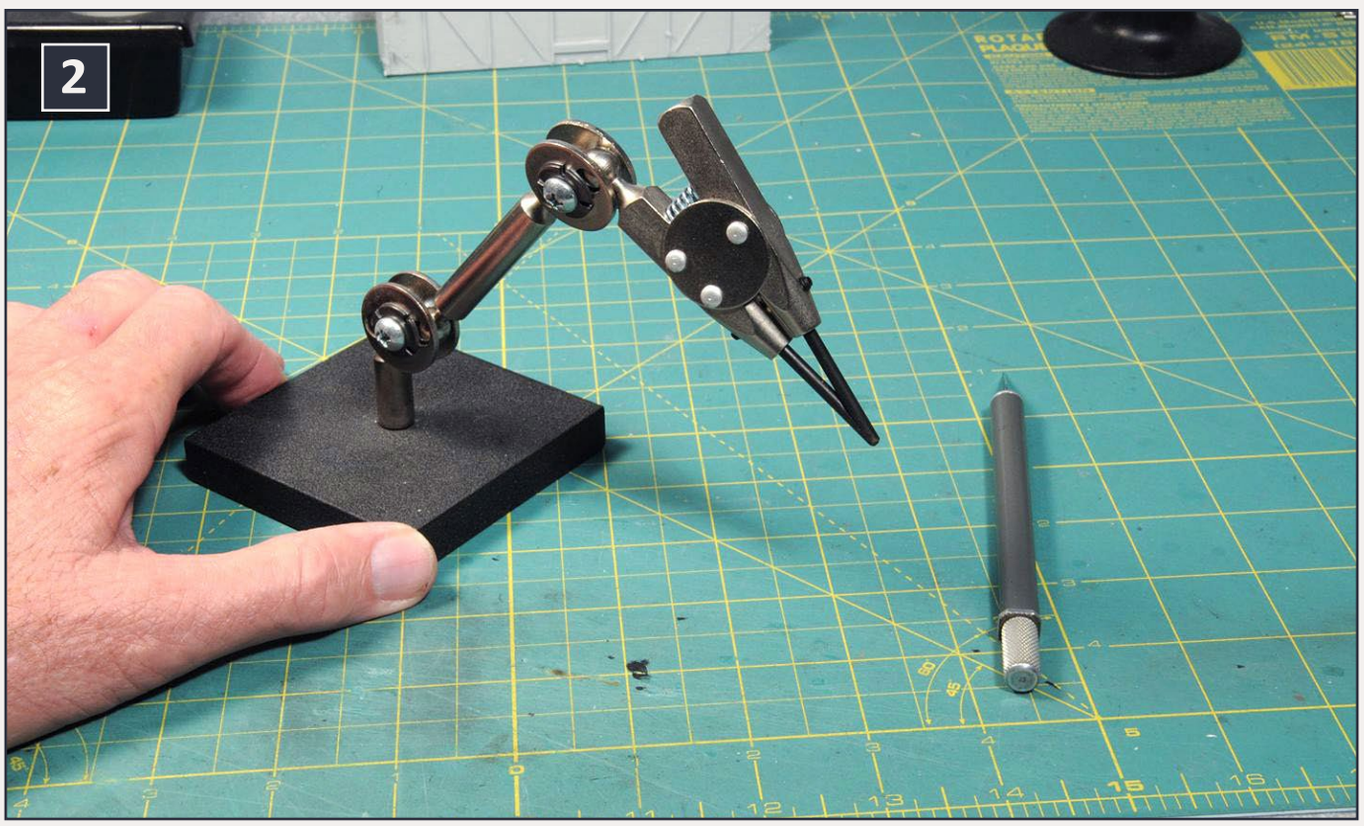


1: This is an X-Acto Third Hand. One of the original alligator clips is on the left while one of my replacement clamps is on the right. Unfortunately, these flat clamps didn't work much better than the alligator clamps.

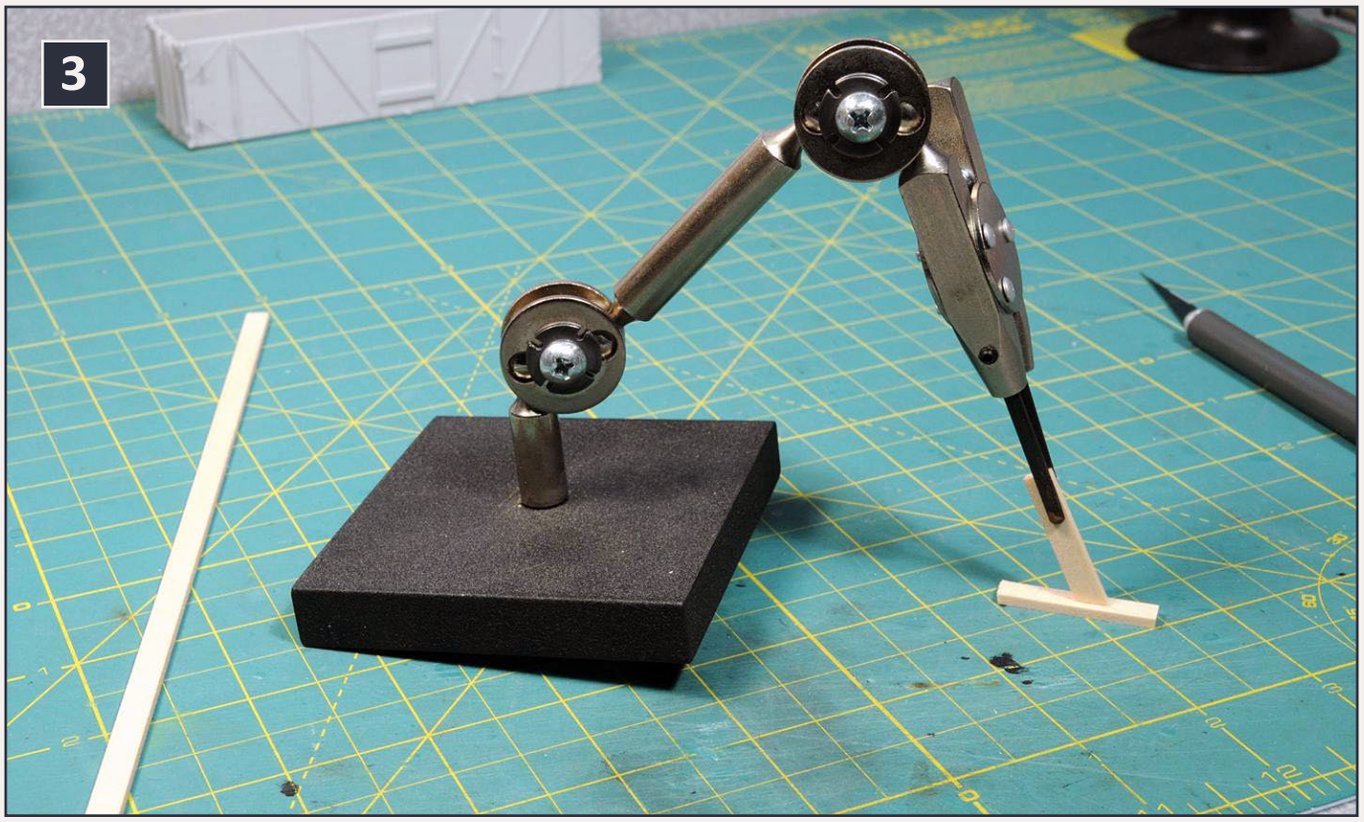
When I get frustrated with a tool I own, my usual response is to start looking for an acceptable replacement. But rather than looking for an alternative from hobby venders, I start looking at tools from professional tool outlets. Among those I check out are those who cater to jewelers. I have been purchasing tools from Otto Frei (www.ottofrei.com) in Oakland, California since the 1970s, long before the Internet became available.

One of the things I realized when I used my X-Acto Third Hand was that I don't typically hold things in both alligator clips. That gave me a lot more options and I selected a Short Third Hand On Weighted Base made by GRS (Item 104.689): **ottofrei.com/GRS-Short-Third-Hand-On-Weighted-Base.html**.

It sells for $39.75. After using it for several months, it has proved to be a quality tool which has functioned exactly as expected. The working faces of the "jaw points" are flat with



2: A GRS Third Hand. It only has a single clamp but that has not proven to be a shortcoming.

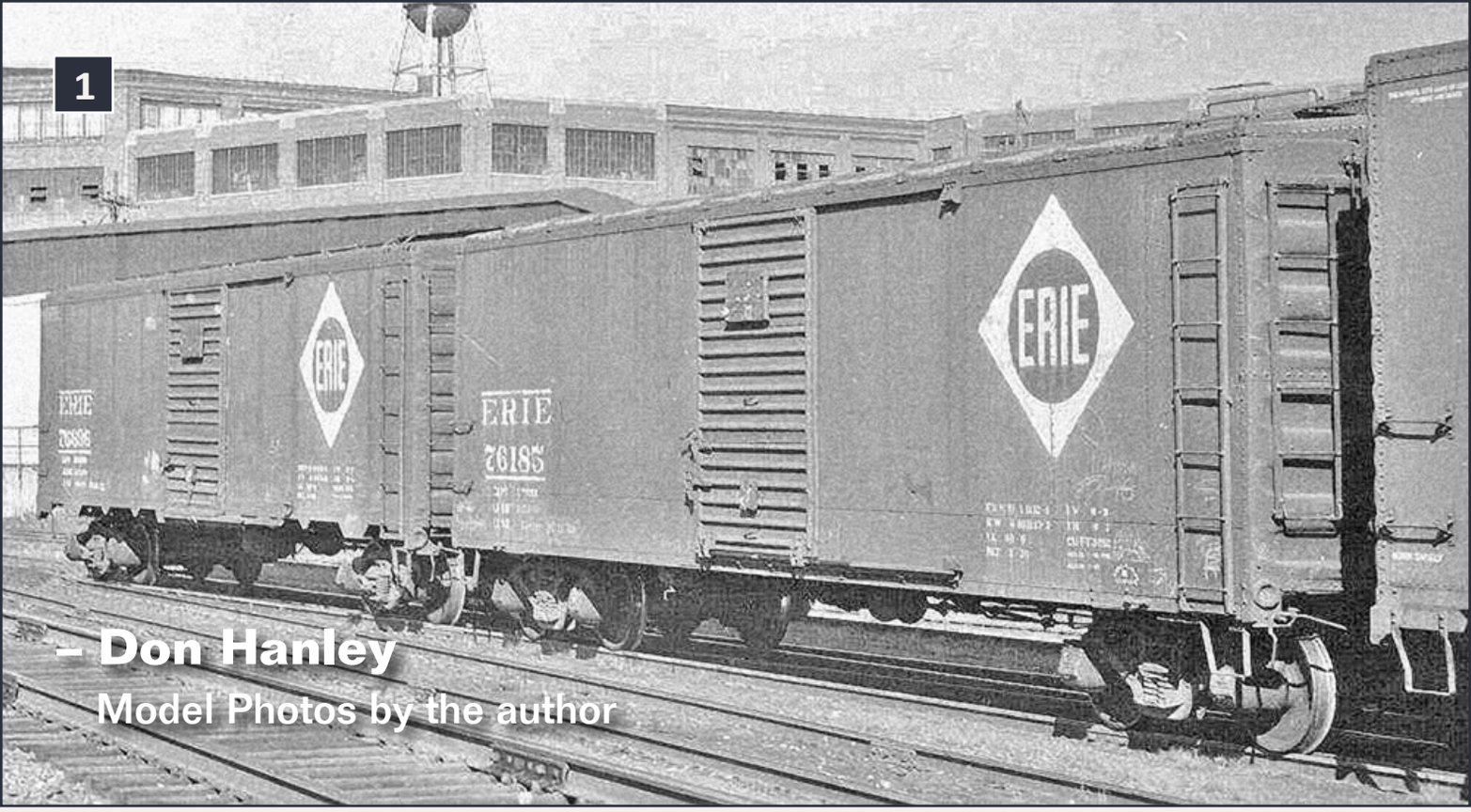


3: Clamping pieces together using a third hand allows you to make sure that they are properly lined up and also hold them together while the glue dries. This "staged" example shows another trick I've used—the clamp is pushed down enough to raise the base slightly off of the workbench. This applies downward pressure on the pieces, insuring a tighter joint.

very small serrations and hold things exactly where you position them. While this tool has ball joints, the joints are larger and highly finished, providing a very smooth movement. Bottom line…jewelers who make their own jewelry for a living aren't going to use a tool which doesn't do the job. That is a lesson worth paying attention to. This is a great tool. ☑

Disclaimer – I love good tools and don't hesitate to invest in them.

Reader Feedback
(click here)



– Don Hanley
Model Photos by the author

The ERIE Railroad Boxcars, part 1

75000 – 75449
75500 – 75999
76000 – 76499
76500 – 76999

Everyone has their own favorite railroad, be it prototype or freelanced and anywhere in between. I have come to love the Erie. I won't bore you to death on how I came to it, but I did. I am sure there

1. This photo started my odyssey, Erie 76185 and 76638 at Mansfield Ohio. Note the differences in the cars. 76185 has has a solid side sill with an interior height of 9'-3". 76638 has the tabs along the sides and an interior height of 9'-4". (Authors collection and used with permission of George Elwood, Fallen Flags Railroad Photos).

are many others out there with their own story regarding their favorite road.

As with most modelers who follow a specific prototype there are cars specific to the road that cannot be purchased in any way, shape, or form. So what do we do? Ignore them (if they're a very small percentage of the rolling stock, that's a possibility), use a close substitute, kitbash, or scratchbuild the necessary cars?

The groups of cars that I wanted to model represent about 17% of the Erie's boxcar fleet on the 1959 OER (Official Equipment Register) so ignoring them was low on the list as an option for me. Scratchbuilding was out of the question since I would need somewhere between 3 to 4 cars from each group. Using something close didn't work either because of the unique nature of the ends and roofs.

So having a problem that I wanted to resolve, I decided to make my own kits.

This article is a description of my trip into the great unknown (at least for me) of making masters and casting. My experience in casting parts is limited. I have cast a few parts before, but nothing on this scale. So, before we begin the adventure, a little history.

History

These all-steel boxcars of the Erie fall into two broad categories, the 1923 ARA design and the 1932 ARA design. The Atlas website has the following.

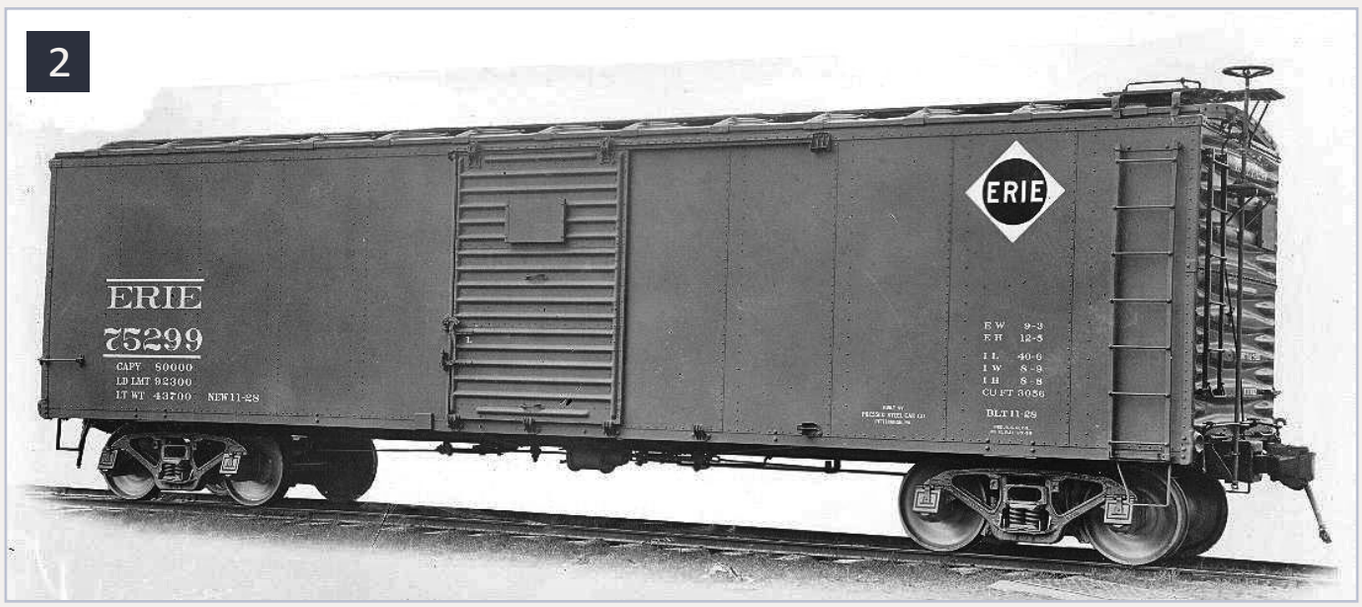
"A goal of the American Railway Association (ARA) in the early 1920s was to produce an all-steel boxcar that could be recognized as a standard by the member railroads.

Although the original design presented in 1923 produced in excess of 60,000 cars, it wasn't until a new design was presented in 1932 that the member railroads gave their approval.

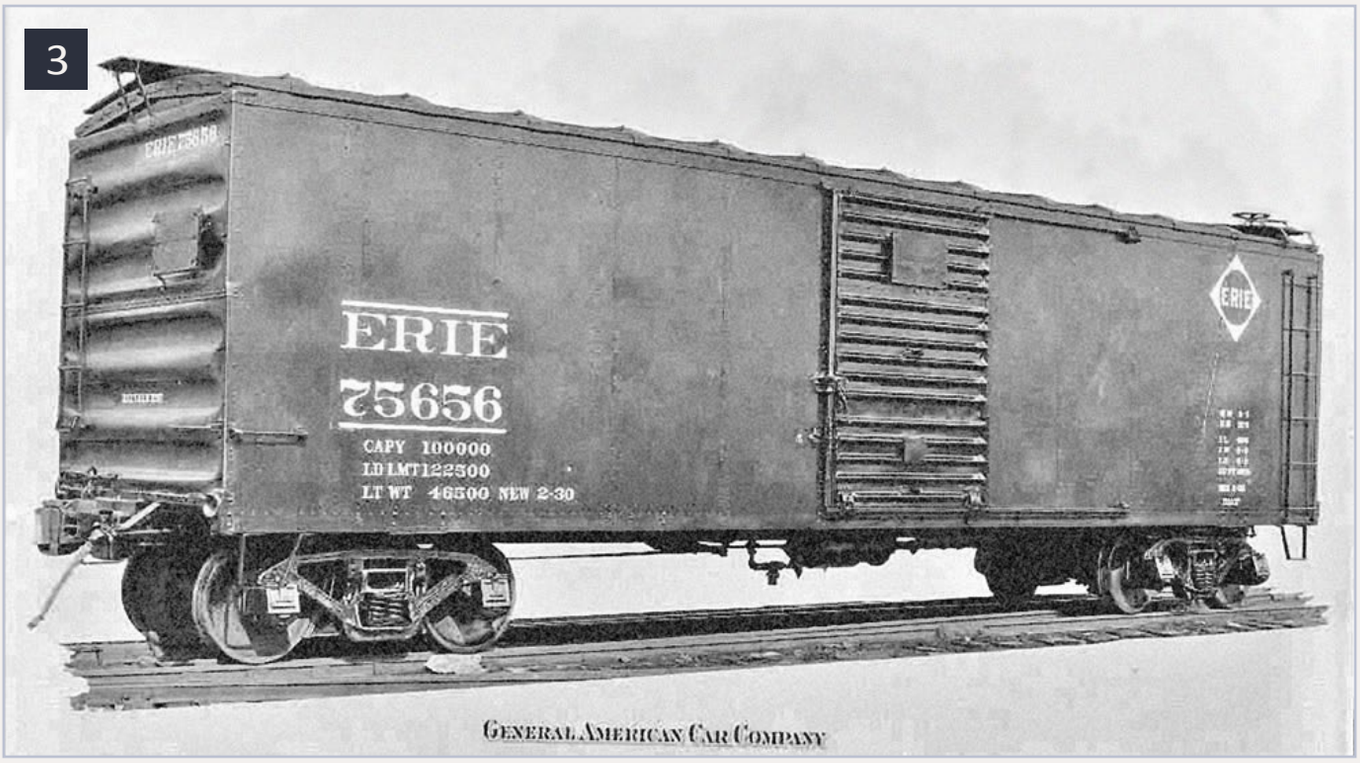
After extensively testing five prototypes in 1933, over 14,500 cars were produced for twenty-three railroads throughout the following decade. This design soon evolved into the 1937, Modified 1937, and Postwar AAR boxcars.

Although not the most popular design produced, numerically speaking, the 1932 ARA Standard boxcar is considered one of the most important designs in railroad history."

As can be seen with only 144,500 cars built to the 1932 ARA Design, it represents a very small percentage of the overall railroad fleet. During the Depression railroads kept purchase of new equipment to a bare minimum, so there were not many examples of 1932 ARA cars built. As a result model manufactures have basically ignored the cars.



2. Builders photo of 75299. (Used with permission of George Elwood Fallen Flags Railroad Photos).



3. General American Car Company Builders Photo of 75656. (Used with permission of George Elwood Fallen Flags Railroad Photos).

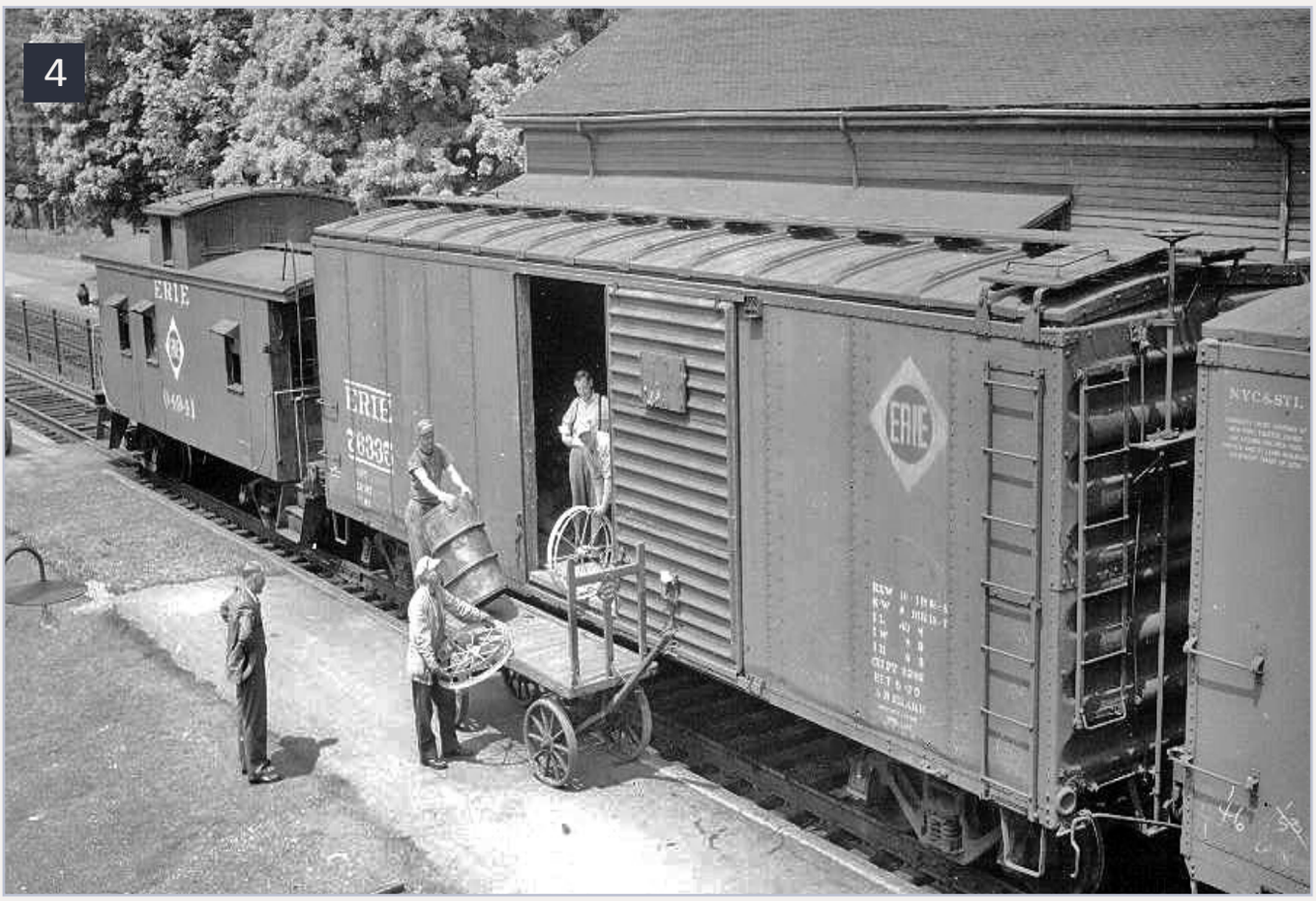
These cars illustrate the evolution of the boxcar in the 1930s. The first group of cars is representative of the ARA 1923 design. First in this group of cars are the 75000 – 75499 series, which were built in November 1929. From the builder's photo it appears that these cars were built by the Pressed Steel Car Co.

The second group of cars 75500 – 75999 were built in February 1930. These cars also had the 8”-8” interior height and solid side sill, which was notorious for rusting out. The cars had Youngstown doors, Chicago Cleveland flexible radial roof. This group of cars began the Erie's use of Buckeye ends.

While these were not exclusive to the Erie, they have become identified with the Erie over time. As far as I can determine these were the last of the cars that the Erie received that had the 8’-8” interior height.

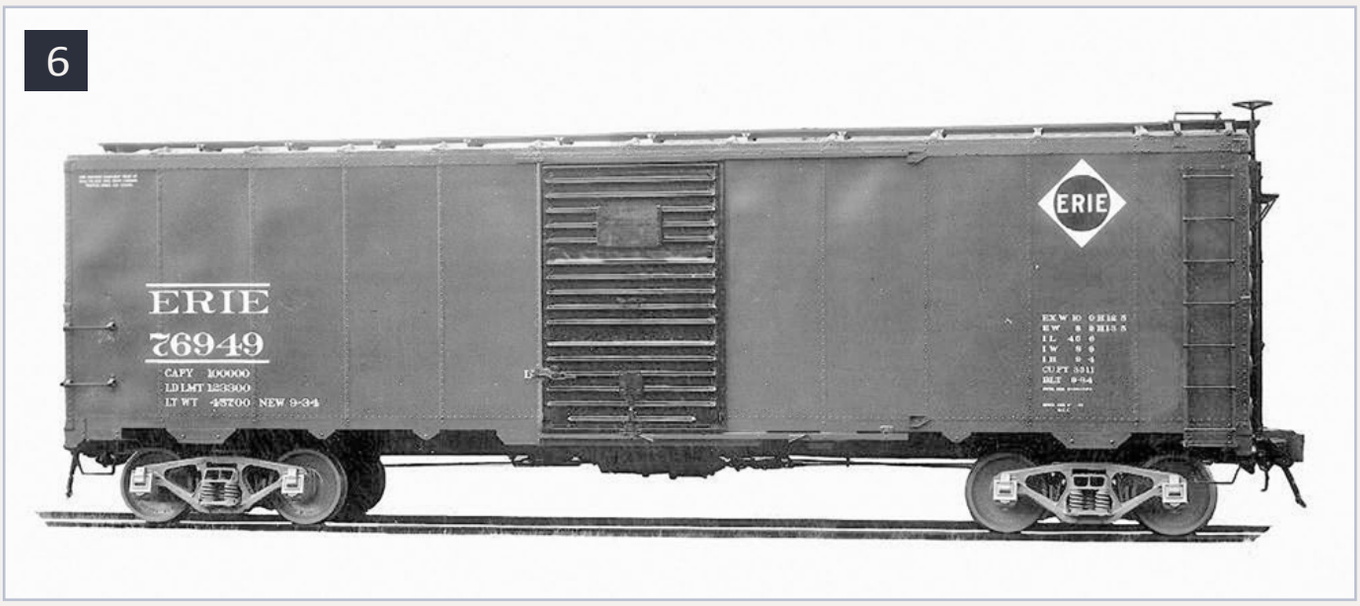
American Car and Foundry built the third group of cars, 76000 – 76499, in September 1930. This group of cars were built with a 9’-3” interior, a full 7” taller than the previous group of cars built just 6 months earlier. These cars were built with Youngstown doors, Buckeye ends, and Chicago Cleveland flexible radial roof.

Even though these cars were 7” taller than their predecessors. They still had 5 ribs on the ends. The extra height difference was made up with smaller half ribs at the top and bottom of the cars. These cars also marked the end of an era. The use of the solid side sill came to an end as well as the use of the radial roof design.



4. Erie 76335 at Narrowsburg, NY in May of 1949. (Authors collection and used with permission of George Elwood Fallen Flags Railroad Photos).

5. Erie 76432 at Akron, OH in April 1959. Note that the original door has been replaced with a Superior door. The car has been repainted at some point in time, most likely when the sides of the car were repaired. The small diamond has been replaced with the larger Erie diamond, however the small Erie Diamond can be seen ghosting through the new paint. (Authors collection and used with permission of George Elwood Fallen Flag Railroad Photos.)



6. Builder's photo of 76949. (Used with permission of George Elwood Fallen Flags Railroad Photos).

Erie Box Car Series	Sides		Roof		Ends	
	8'-8" IH	9'-3" / 9'-4" IH	Radial	Viking	Dreadnaught	Buckeye
75000 – 74999	X		X		X	
75500 – 75999	X		X			X
76000 – 76499		X	X			X
76500 – 76999		X		X		X

6A. This matrix summarizes the sides, roof, and ends for each series of Erie boxcar. As you produce each car in a specific series, use this matrix to determine the proper combination of side, roof, and end.

The final group of cars is the 76500 – 76999 series. It appears from the freight car diagram that American Car and Foundry built this group of cars. This group of cars were the first to have the tabbed sides at the bottom of the car. Also introduced at this time was the Viking roof. This roof was also used by other railroads and is not specific to the Erie. In addition this group of cars grew by 1" to have an inside height of 9'-4".

This gets us to the 76500-76999 series. This group of cars was built to the 1932 ARA design, which introduced the standardization of boxcar design. Sunshine models produced this car as kit # 21.11. The Sunshine models are now out of production, however they may be able to be picked up at a swap meet. I also believe that these cars were manufactured by Atlas at one time and may also be available at swap meets.

The last of the Erie cars with Buckeye ends and Viking roofs are the 78000-78499 series. This group of cars has a 10'-0" interior height and follow the ARA 1937 design. Sunshine models has also produced these cars as a craftsman style kit. Since I have several of them I did not bother to include making them as a part of this article.

Lessons Learned

Now that the project is completed it is time to evaluate the entire exercise. There are several lessons and conclusions that I have reached, and believe that it is important to share.

1. I under took too large of a project. I thought that I could build quality models from masters and that it would be relatively simple. The truth of the matter is that I should have focused on building one of the series of cars and honed my skills on it. I tried to eat too large of an elephant.

2. I need to develop a better method of controlling my castings. Just pouring the material into the mold did not give enough control over the thickness of the casting. Some of the castings had a convex surface that had to be sanded down. While I was reasonably successful at doing this, it was extra work. This extra sanding also made some of the fitting of joints a bit dicey. This caused problems in putting the pieces together to build the cars.

I would rate the castings at about 80% of those provided by Sunshine or Westerfield. I had hoped to do better.

3. The material that I used to cast the parts had too quick of a set time. I should have purchased a casting material that had a longer set time. Because of the quick set time I was not able to use my jigsaw method of removing air bubbles from the castings like I was able to when making the molds. A longer set time would have allowed for this process at a minimum.

4. I should have taken time to sketch or draw up the basic dimensions that I needed, as I did for the tab spacing. I discovered that I had some errors in dimensions. The cars are a little short in length. Planning ahead would have eliminated this problem.

Lessons Learned *Continued ...*

5. Small sanding scratches that are not visible in the master or in the unpainted casting show up when the parts are painted. I needed to do a better job at finish sanding. I should have taken time to get out the 600 grit wet dry sandpaper to polish the masters.

6. Painting, detailing, and decaling the cars before assembly worked great. In the end I only had to replace 1 grab iron and 2 stirrups. For me it is a lot easier to decal on a flat surface than on the raised surface or ends of a boxcar. I can rest my hands on the work surface, which I find very beneficial. I will use this procedure with any future craftsman kits I build.

Will I continue with this project; absolutely. Some time away from this project is necessary. Some of the changes that I will make are:

1. I will try different casting materials.

2. Learn to control the thickness of my molds by making a back piece to control the thickness.

3. I am considering remaking the masters and building complete bodies. This would eliminate the problems with different thickness of the various parts. The drawback, although minor, is that I would have to learn how to make two-part molds and how to pour the casting material into a two-part mold.

4. I am strongly considering purchasing the necessary computer programming to have a 3D print, such as Shapeways 3D printing made for my masters. I don't think that it would be cost-effective at this time to generate a 3D print of each car that I want to model. That could change in the near future.

It's one of those items that will need to be investigated. The cost of the program to make the drawings is $495, around the price of an AB engine set with DCC and sound. The question is will I use it enough on other projects to make it worthwhile? I suspect that once I have it I will wonder how I ever got along without it. However I haven't been able to cross that mental hurdle yet.

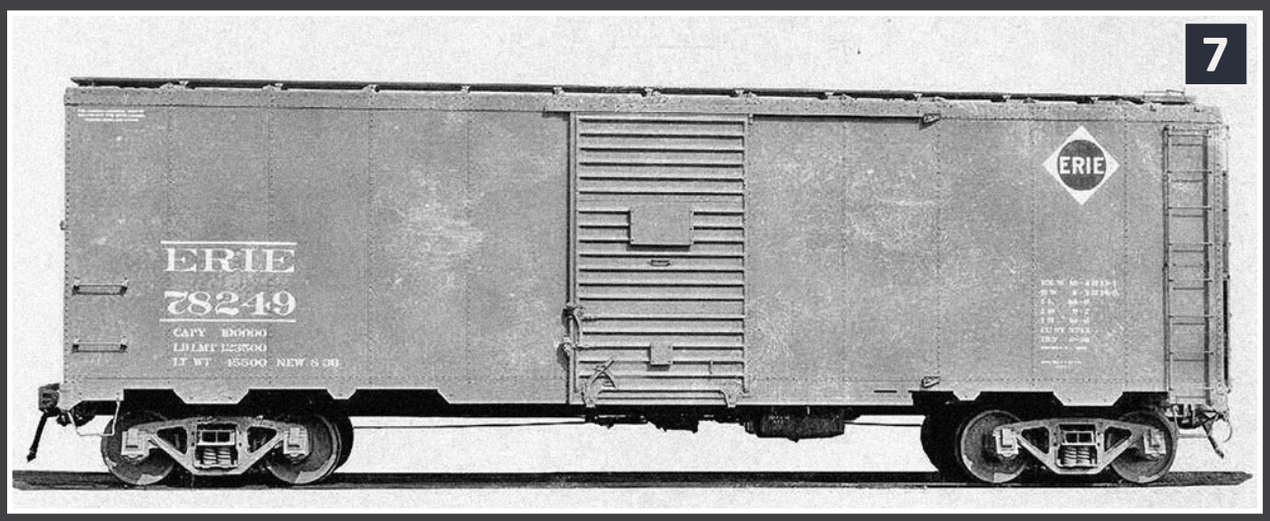
5. I need to look into the cost of a small vacuum machine for casting in the future. While the smooth cast product I used said that it does not have air bubbles, they are an issue. A vacuum system is one way to eliminate them.

With all of that being said, I am interested in hearing about the experiences that others have had. Or am I the only one crazy enough to attempt something like this? I hope that the last bit of musings will help others avoid some of the pit falls that I ran into, and encourage others to take on the adventure.

I think the most important lesson to be taken away from this is that things don't always work as planned or as we thought that they would. Just because the goal desired was not achieved, does not mean it wasn't worth the effort.

At the very least I learned new skills. I learned areas I need to improve on, and more importantly I thought outside of the box (for me) when it comes to modeling. If you never try something new and above your current comfort zone, you will never grow in your modeling skills. ■

STEP 1A: Car Sides 75000 – 75999 Series



7: One quick note before starting; unless otherwise stated all dimensions given are in scale feet and inches.

I began by setting a piece of plain .020 styrene against my T-square on my work surface and then taped it in place. I laid the styrene the long way across the work surface so that all I would have to do is to make one cut for the proper car height.

I like working with .020 styrene because it cuts easier than the thicker styrene stock. A couple of cuts with a sharp X-Acto knife and I am most of the way through. 6” styrene will be added on the back side to bring the car sides to sufficient thickness for casting.

I began with the sides for the series of cars that do not have the tabs. Work on the easy parts first, right? Anyway, I laid out the proper side height for the 8’-8” interior cars. The height needed was determined by measuring both a Red Caboose X-29 car side and dimensions from the freight car diagram sheet. The sides measure 9’-4”.

I measured up from the factory edge the proper distance

STEP 1A: Car Sides 75000 – 75999 Series *Continued ...*

and made a small mark with the X-Acto knife. With the knife blade in the mark, I run the T-square up to the blade and made a single pass with the X-Acto knife across the top of the car. I find that I have much more accurate measurements this way than with a pencil. Since I did both sides in a single pass, I know they will be the same height.

I measured in 39'-8" from each edge of the styrene to mark the length of the car side. I determined this length by measuring a Sunshine Models kit that somehow never was put together. I measured in from each edge so that I would be working from the factory edge. This left a small gap in the center of the styrene that I drew an "X" in so I knew it was waste.

After the limits of the sides were marked I located the center of the car side. From this point I measured 3' on each side and drew in vertical lines. These lines mark the door opening and again an "X" was drawn in the door area marking the areas to be discarded. I find that if I do this it creates a visual effect that eliminates confusion as to where the various parts of the car are.

Next I laid out the side panels. There are 5 panels on each side of the door, and each panel is 3'-4" wide. Trying to measure out each panel one after the other is a recipe for disaster. I turned to an old trick that draftsmen used (yes I took drafting classes in high school, long before computers and CAD programs became available).

I used my 3-sided engineers scale and found a measurement that easily divided the side into 5 equal parts, but was longer than the length of the area to be divided. Holding one end of the scale at the door mark, I rotated the scale untill the other desired mark was at the edge of the

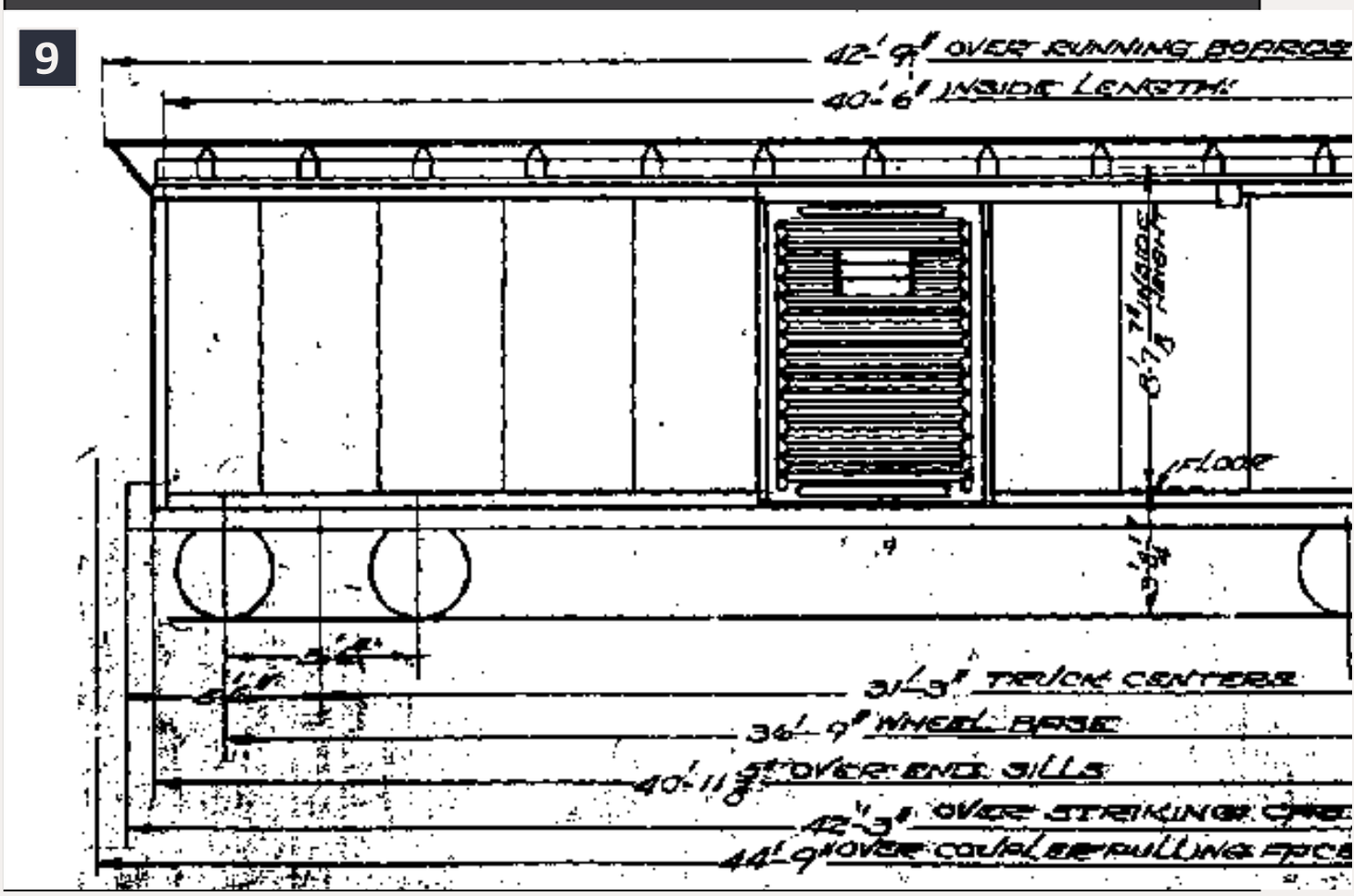
STEP 1A: Car Sides 75000 – 75999 Series *Continued ...*

car. This gives equal spacing at the desired dimensions. The procedure is repeated for all areas where the panels are. Once all of the panels were marked, I scribed the seam for the panels.

I got the cart ahead of the horse and placed a piece of 1” x 6” styrene across the top of the car sides using the T-square to make sure that it was straight. While this step did not hurt anything, it made transferring location information from the 8’-8” to the 9’-3” car side a little more difficult.

9: The freight car diagram for the Erie 75000-75499 series of cars. While some of the data is not legible, the important dimensions in the drawing are readable.

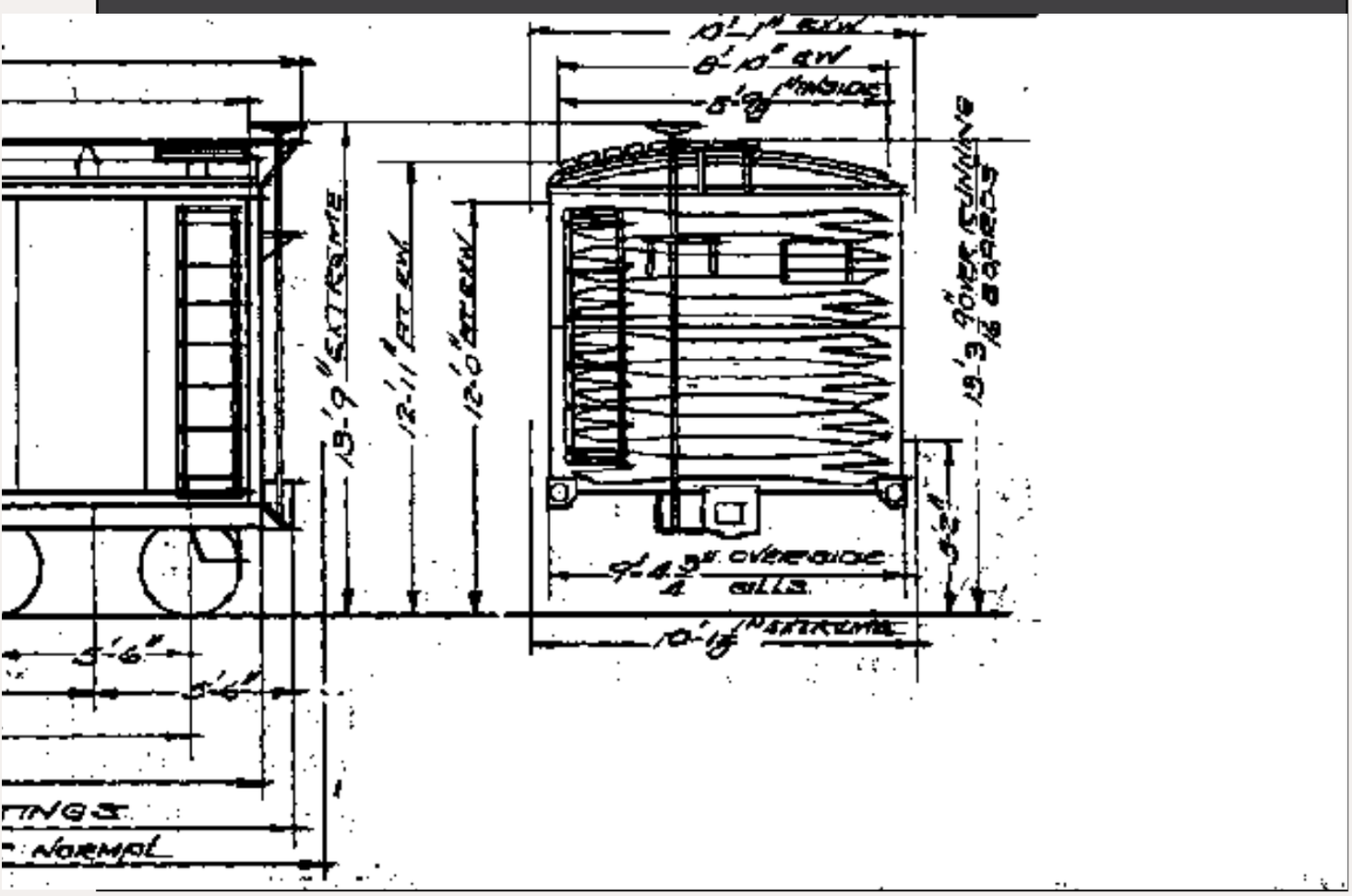
9



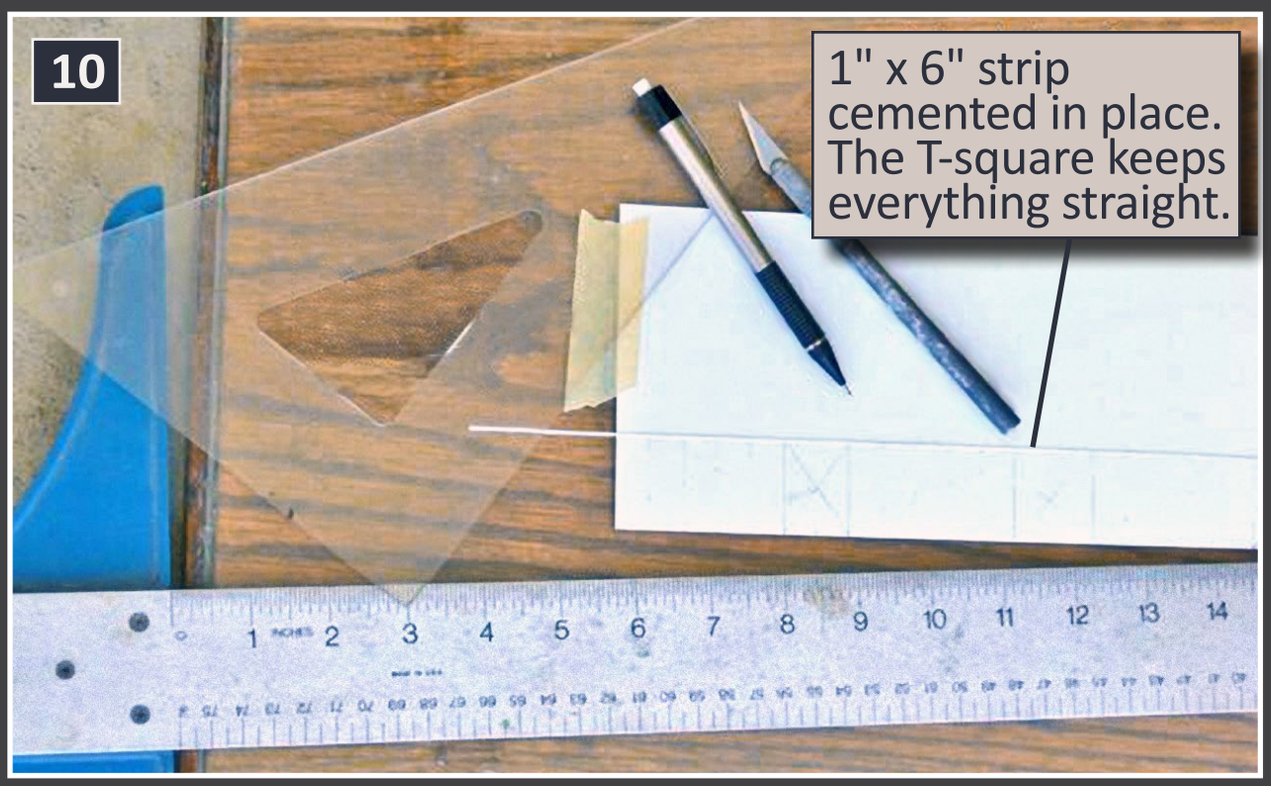
STEP 1B: Car Sides 76000 – 76499 Series

Since there are no models that I am aware of that have the 9’-3” inside height I assumed that you just add 7” to the height of the side of the car. This provides a side height of 9’-11” (9’-4” + 7” = 9’-11”). I verified this by pro rating the differences between the 8’-8” car and the Sunshine 10’-0” car sides. I came up with the same dimension of 9’-11”.

Once I was comfortable with the dimensions I measured down from the top of the styrene the 9’-11” distance and scribed a horizontal line to mark the limits of the side. Now to the easy part; all the vertical information was transferred from the previous car sides to the 9’-11” car sides by using the T-square along with a drafting triangle. When I was done I had duplicated everything that is needed.



STEP 2: Car Sides Adding the Details



10: Now it is time to begin adding the details. I added the 1” x 6” strip across the top of the 9’ – 3” car sides. Using the T-square I made sure that the 1” x 6” is straight and parallel with the bottom of the car. If it's not it will be visually noticeable.

Next it's time to make and install the top and bottom door guides. The guides are nothing more than 2” x 4” styrene strip cut to a length of 12’-4”. A total of eight are needed for the four car sides. The top door tracks are located first at the left hand edge of the door opening. With the top door tracks in place, I began searching through my “junk” drawer(s) for proper Youngstown doors.

For the 75000-75999 series cars I found 2 doors from a Red Caboose X-29 kit that fit the 8'-8" car sides. I had screwed up and put on the Superior doors when I built the kit. Oh well, it worked to my benefit years later.

STEP 2: Car Sides Adding the Details *Continued ...*

I made sure that the doors were square in the opening with the T-square and a triangle before cementing began. Once I was satisfied that they were square in the opening, the doors were cemented and allowed to dry. Once the doors had set, I added the lower door guide using the T-square to make sure that it was parallel with the top door track. The bottom door track should be 6” above the bottom sill of the car.

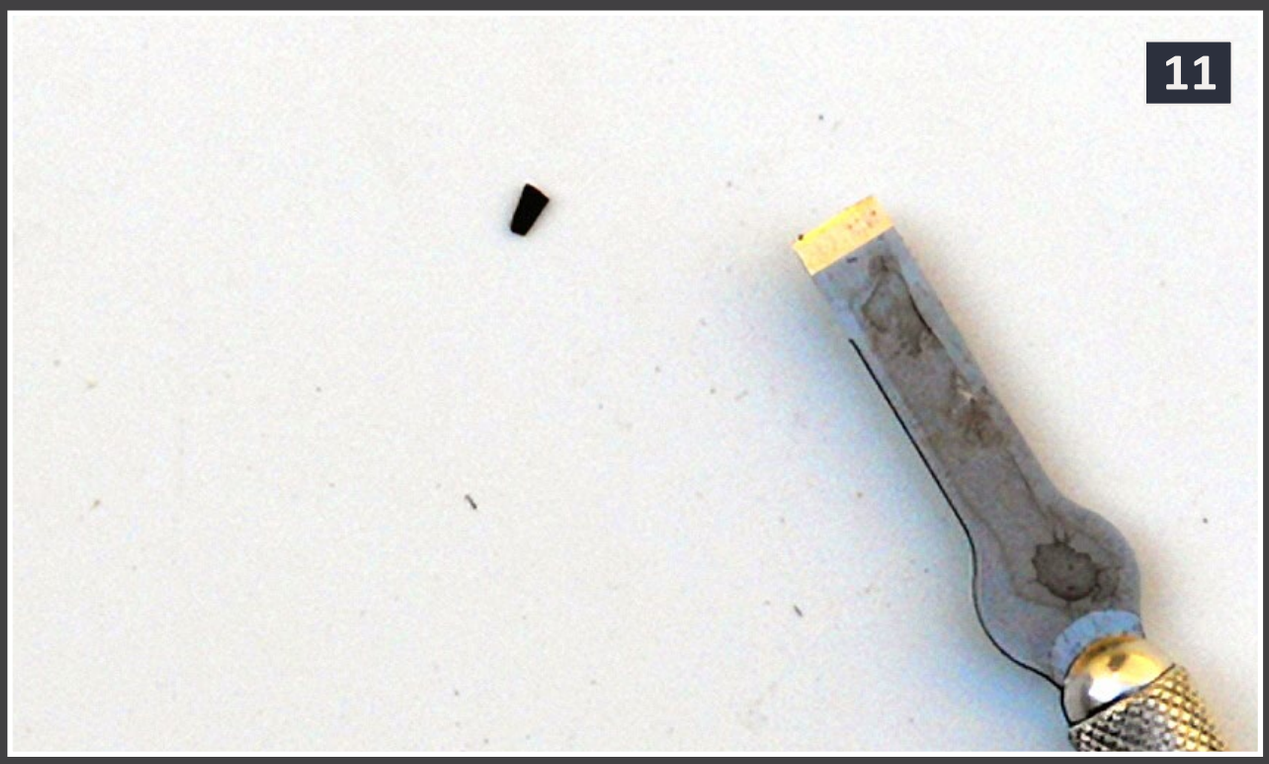
During the same search I found 2 Youngstown doors that were from a Branchline kit. These needed to be modified for the 76000 – 76499 series cars. The modification is simple. I used my X-Acto miter box to cut out the middle rib from the top panel of the door. When finished the door should measure 8’ – 8”.

Careful cutting and a little cleanup with the Northwest Short Line true sander is all that is required. When I was done there were 3 ribs at the top panel of the door. While this doesn’t match the prototype, I was OK with it.

The bottom door track was installed in the same manner as the previous car sides. When finished there should be 6” from the bottom of the door track to the bottom of the car.

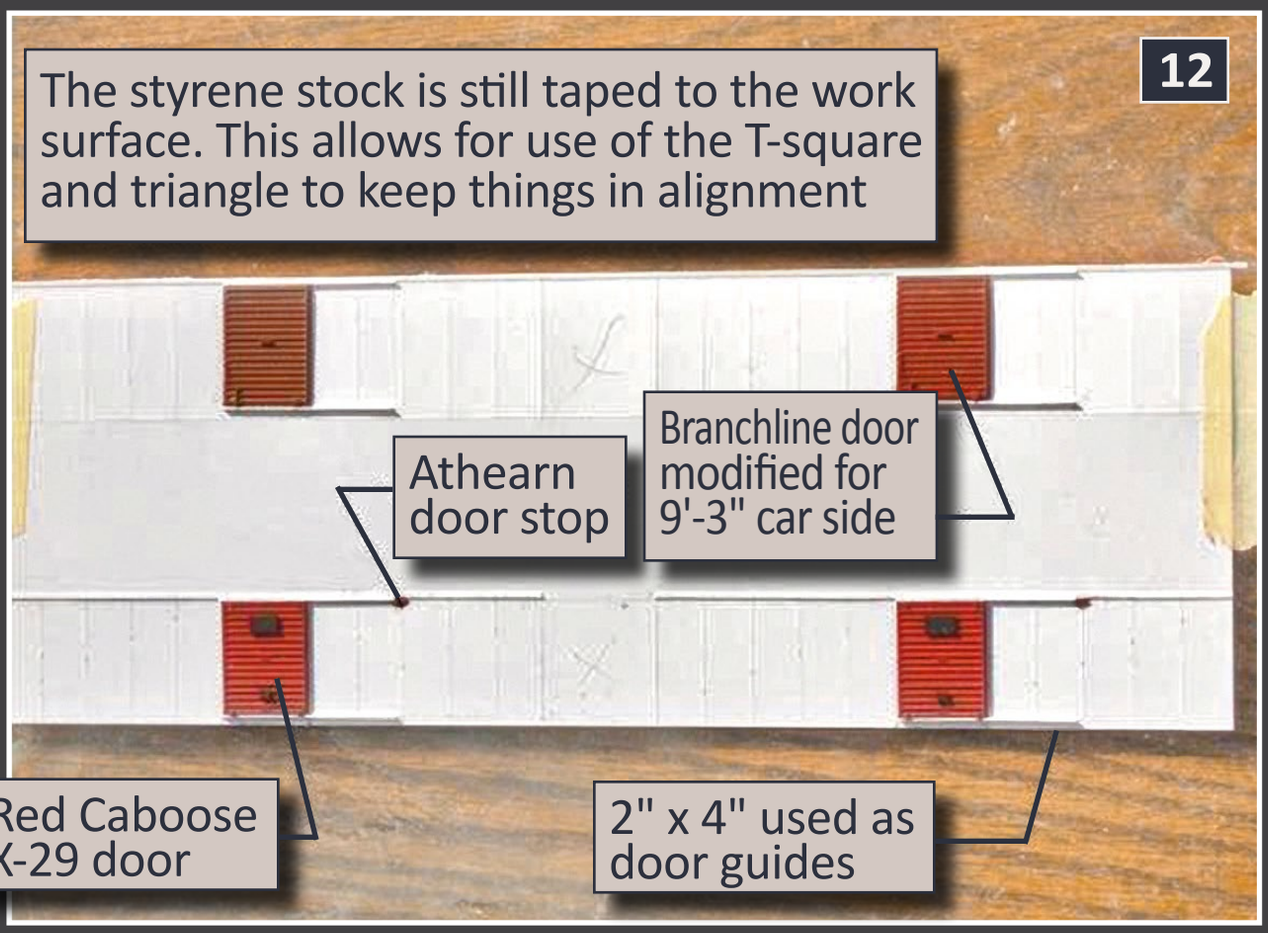
In my continuing scavenger hunt of the scrap boxes, I looked for tack boards and defect cardholders. I found the tack boards, but only two defect cardholders. I know that they are out there somewhere in the vortex of scrap parts and they shall be found! These were located and cemented to the car sides following the photos.

STEP 2: Car Sides Adding the Details *Continued ...*



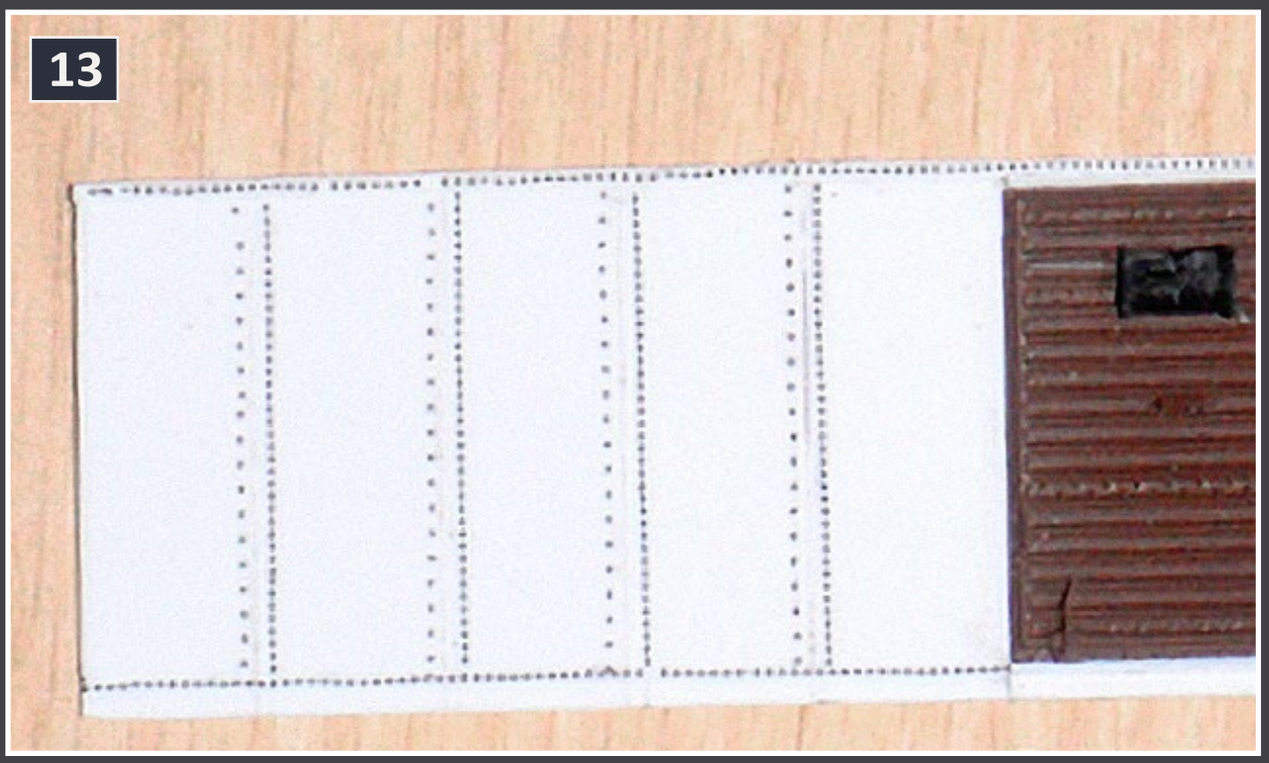
11: The next detail to add is the doorstop. I gave a brief thought about scratchbuilding them. It only took a nanosecond to discard that idea and I decided that it would be better to shave off the necessary doorstops from some Athearn Blue Box 40' box cars. 2 cars sacrificed their stops, a moment of silence for them. OK, that's enough silence.

Be careful with these little parts. Notice how small the door stop is in relation to the X-Acto knife. These small parts are easy to lose and almost impossible to find if they make it to the floor. The four stops were cemented to the end of the top door guide rail. And that takes care of the major cutting and cementing of parts.



12: A comparison of the car side. Notice the difference in the height of the cars.

STEP 3: Adding Rivets, rivets, and More Rivets



13: Thank goodness for Micro-Mark and their rivet decals. If it were not for them or some other similar product I seriously doubt that I would under take this project.

I discovered very quickly that placing the decal rivets is a lot like decaling striping on a passenger car or locomotive. You have to take your time to get and keep the decals straight. If not, you will notice the crooked lines. My method for decaling is to use a straight edge and a sharp X-Acto blade to cut the decals from their sheet.

I began by decaling on the rivets across the top of the car on the 1” x 6” piece of styrene. Use the closely spaced rivets. Once these were set in place, I decaled the rivets across the bottom of the car using the lower door guide as a reference point. I worked out from the door in both directions.

STEP 3: Adding Rivets, rivets, and More Rivets *Continued ...*

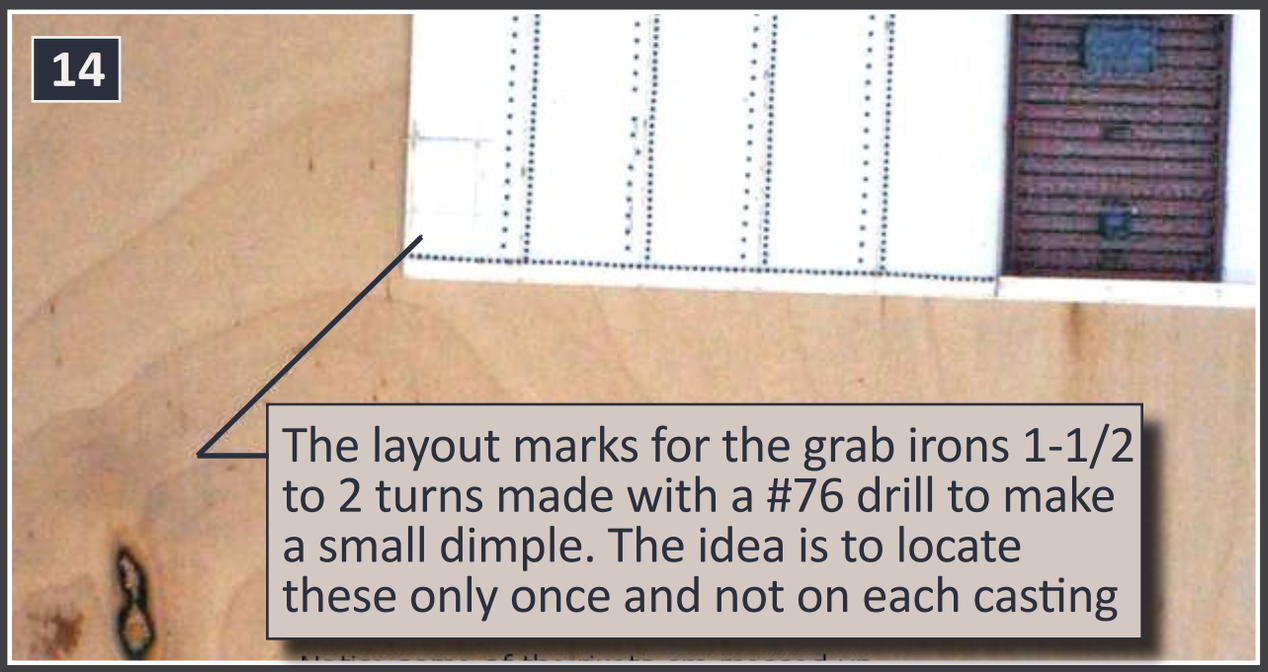
Having 4 car sides to work on gives you plenty to do while the recently placed decals dry. As with any other of my decal project, I use Walthers Solvaset to snug down the decals. This stuff lasts forever. I have had the same bottle for over 15 years and it still works like the first time I used it.

Next I began the vertical rivets. I cut strips to match the lengths needed. The areas under the door and at the door-stop are shorter than the rest of the car. Again I used the closely spaced rivets. The rivets are placed 2” from the right hand side of the scribed line. It's important to take time to make sure that the rivets were straight and parallel with the scribe seams.

Once some of the rivets have had time to set, I began decaling on the wide spaced rivets that come with the set. These represent rivets that are spaced at two times the distance of the first lines of rivets. These were placed 6” away from the rivets along the scribed line and on the outboard side of the car, the side away from the door.

I discovered that it is easy to dislodge the rivet decals from the raw styrene. It appears that there is very little for the decal to bite into to and hold on. So before I went any further, I sealed the sides with Floquil Crystal-Cote.

STEP 4: Locating Grab Irons

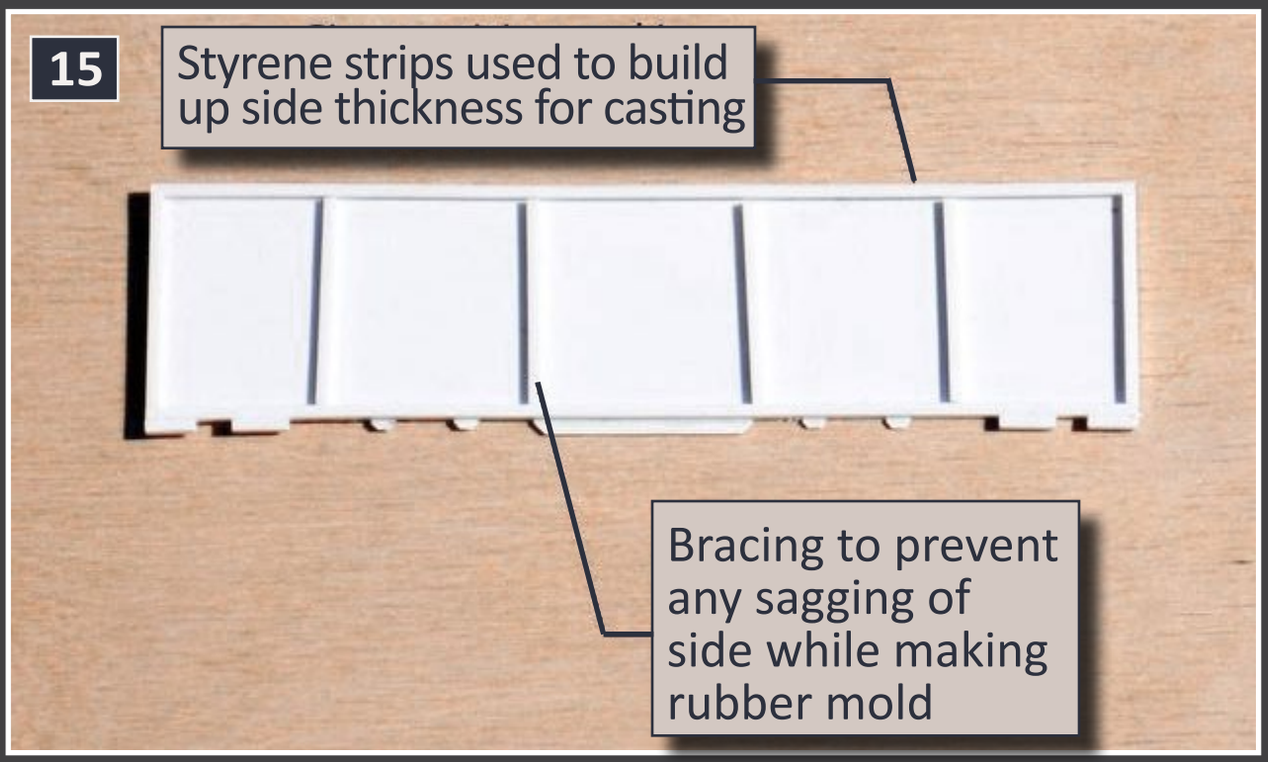


14: I will be making castings of the sides, so I took the time to layout where the grab irons will go. I use Detail Associates freight car grab irons part #229-6209. I began by marking the lower grab iron location up 2'-2" from the bottom of the car side. This will be where the top part of the bracket will be mounted. The second bracket was located 4'-2" up from the bottom of the car. I drew horizontal lines on the sides of the car.

I use a .05 mechanical pencil for marking my lines. Next 2 vertical lines were marked. The first being 2" in from the edge of the car side. The second line was marked 1'-11" from the edge of the car side. This gives the proper spacing of 1'-9" for the mounting tabs on the casting.

I then used a #76 drill bit and made 1 to 1-1/2 turns to make a small divot in the styrene. This way I will have the locations marked on the castings and will not have to repeat the location process on every car side. At least that is the plan. I'll find out how well it works once I make a casting.

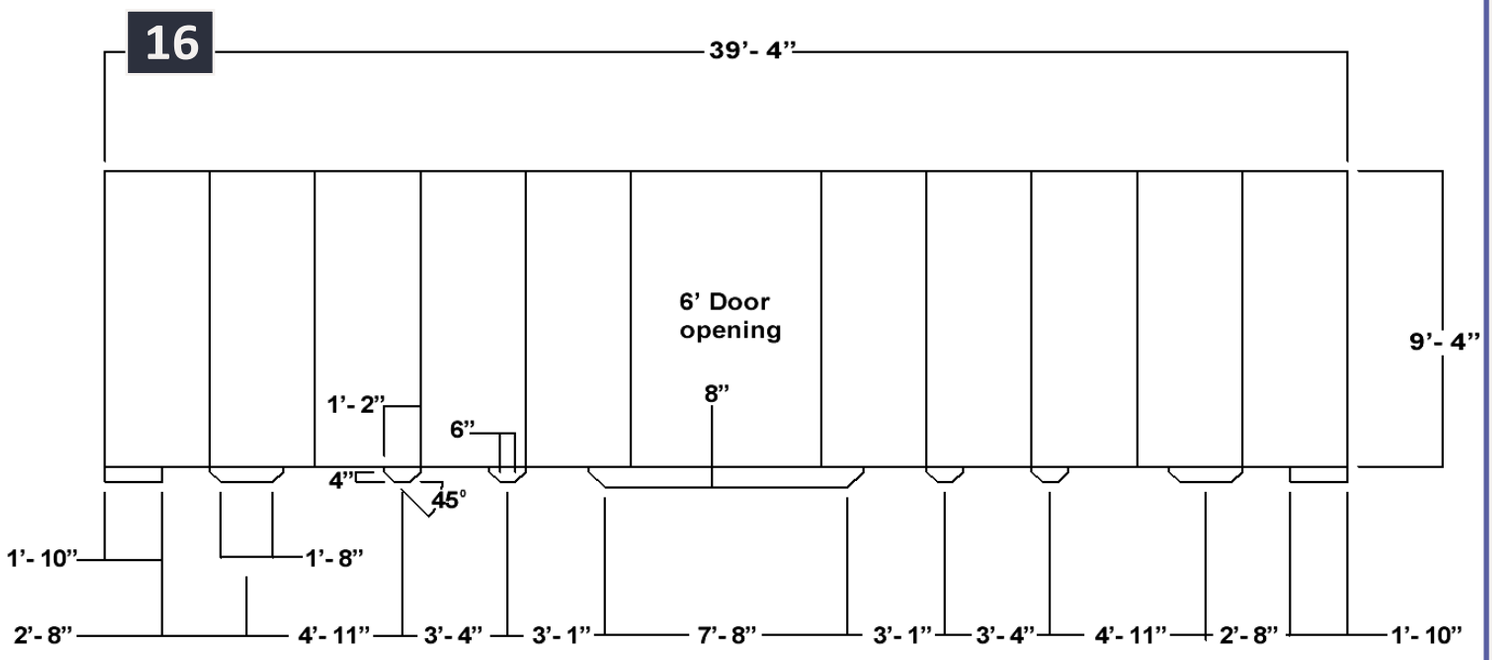
STEP 5: Proper Car Side Thickness *Continued ...*



15: Now it is time to bring car sides to the desired thickness. You may wonder how I came up with the necessary dimensions. I cheated. Actually I copied the sizes from the Sunshine Models Erie kit. I figured that if I followed their dimensions for size and thickness, everything would come out correct. Why go to the trouble to calculate everything and reinvent the wheel?

The sides of the car on the Sunshine Models kit are 8” thick. Since I was using that as a guide, I added 4” x 6” styrene stock along the backside of the car side. I started at the bottom and top cutting pieces a little long so that they could be trimmed to fit. I next cut pieces to fit in between the top and bottom strips. I placed the pieces on a relative uniform spacing.

STEP 5: Proper Car Side Thickness *Continued ...*

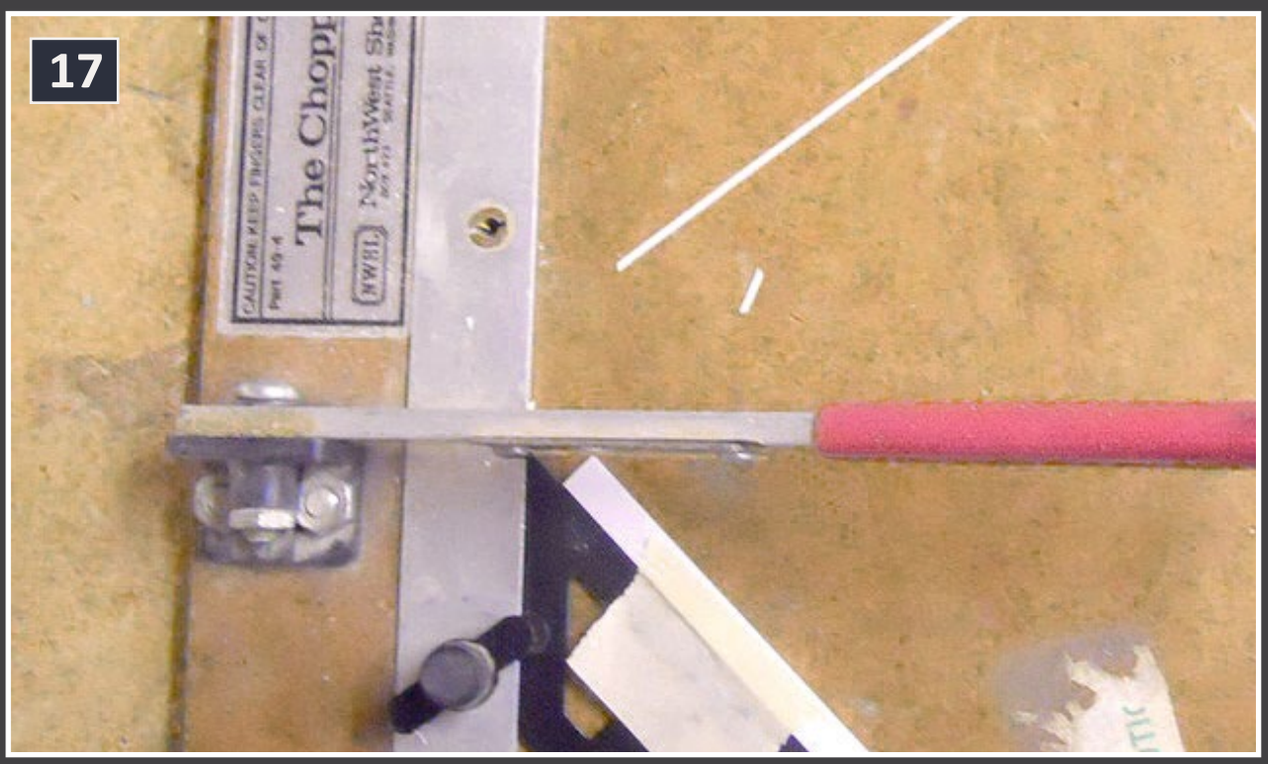


16: Tab spacing diagram drawn to assist with the construction and location of the tabs.

Accuracy is not that necessary as the pieces only are needed to stiffen the sides and prevent any possibility of warping when the silicone rubber is poured over them to make the mold.

After the 4" x 6" stiffeners were added, I located where the stirrups will be placed and made some divots similar to the ones needed to locate the grabs on the side of the car.

STEP 6: Car Sides 76500 – 76999 Series



17: This is how I set up the chopper to cut the tabs.

Now, on to the tabbed car sides. These cars are 1” taller than the 76000 – 76499 series. Normally I wouldn’t have worried about the difference and made them both the same. But in studying the photos of the two different series of cars I noticed that the ends of 76000 – 76499 have five ribs and the 76500 – 76999 have six ribs.

Since I need to make different ends for each one I went ahead and made the side heights per the prototype. I followed the same procedures as on the other sides with the noted exceptions.

My original plan was to cut the tabs out of the .020 styrene body. I wasn’t satisfied with the results. They looked just plain awful, and made a quick trip to the trash can. Plus, as I studied the photo of 76949, I realized that I cut the tabs wrong. After some thought about how to proceed, I

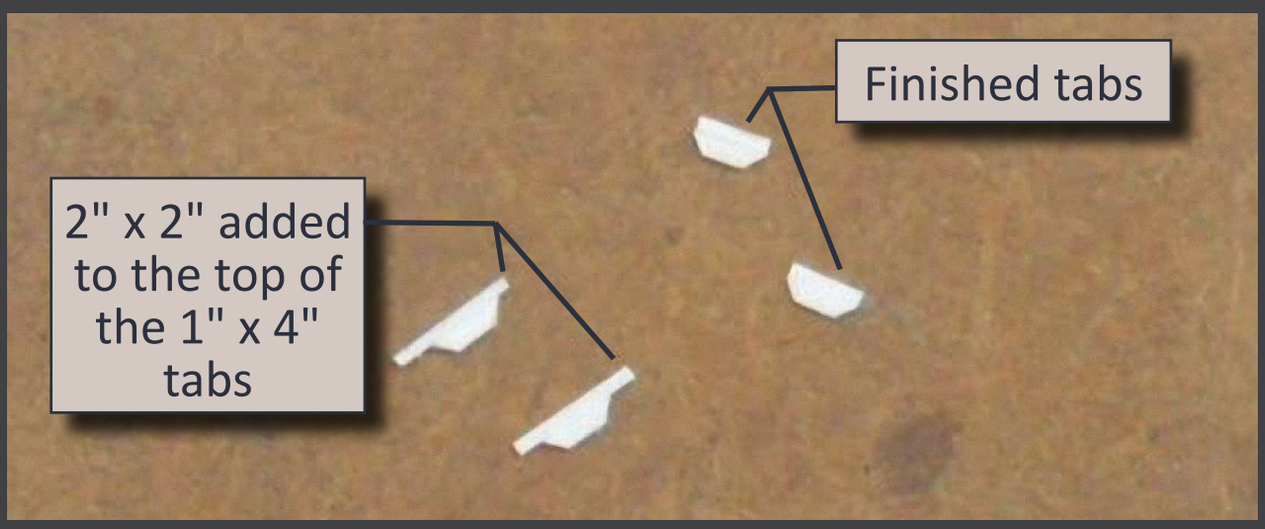
STEP 6: Car Sides 76500 – 76999 Series *Continued ...*

decided to try building the tabs separately and then cement them to the body.

The tabs are 6” in deep. They are tapered at a 45º angle for the bottom 4”. It seemed like a daunting challenge to make these but with a little set-up it wasn’t all that hard.

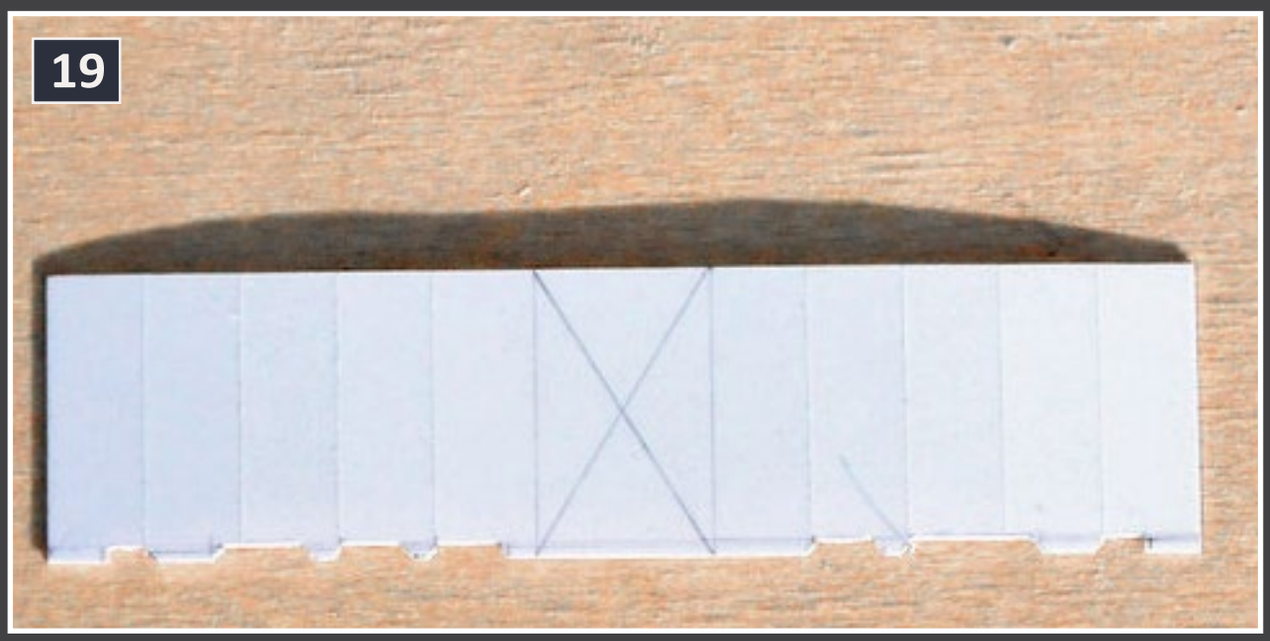
I began by cutting the tabs out of .020 x .040 strip styrene. I set up my chopper so that I could cut the .040 strips to length with the 45º angle, making 8 small ones, and 4 tabs for the bolster locations. I then cut .020 x .020 styrene to add to the tops of the tabs. These were cut long so I could trim off the excess that extended beyond the 45^0 angle. Once I was satisfied with all of the pieces I cemented them to the car side.

I built up the thickness for the sides the same as before. The only difference was that I added small pieces of the 4” x 6” styrene under the tabs. I did not try to make these pieces match the tabs; instead I cut them long so that I could file them down to match the tabs. While this was a bit tedious it worked very well. In the end it probably was the best method for achieving the results that I wanted.



18: The tabs for the 76500 –76599 cars.

STEP 6: Car Sides 76500 – 76999 Series *Continued ...*



19: The tabs have been placed on the cars sides. The top master is complete with the lower master needing some additional work. The X marks the location of the door. The doors and the top guide rails are yet to be installed.

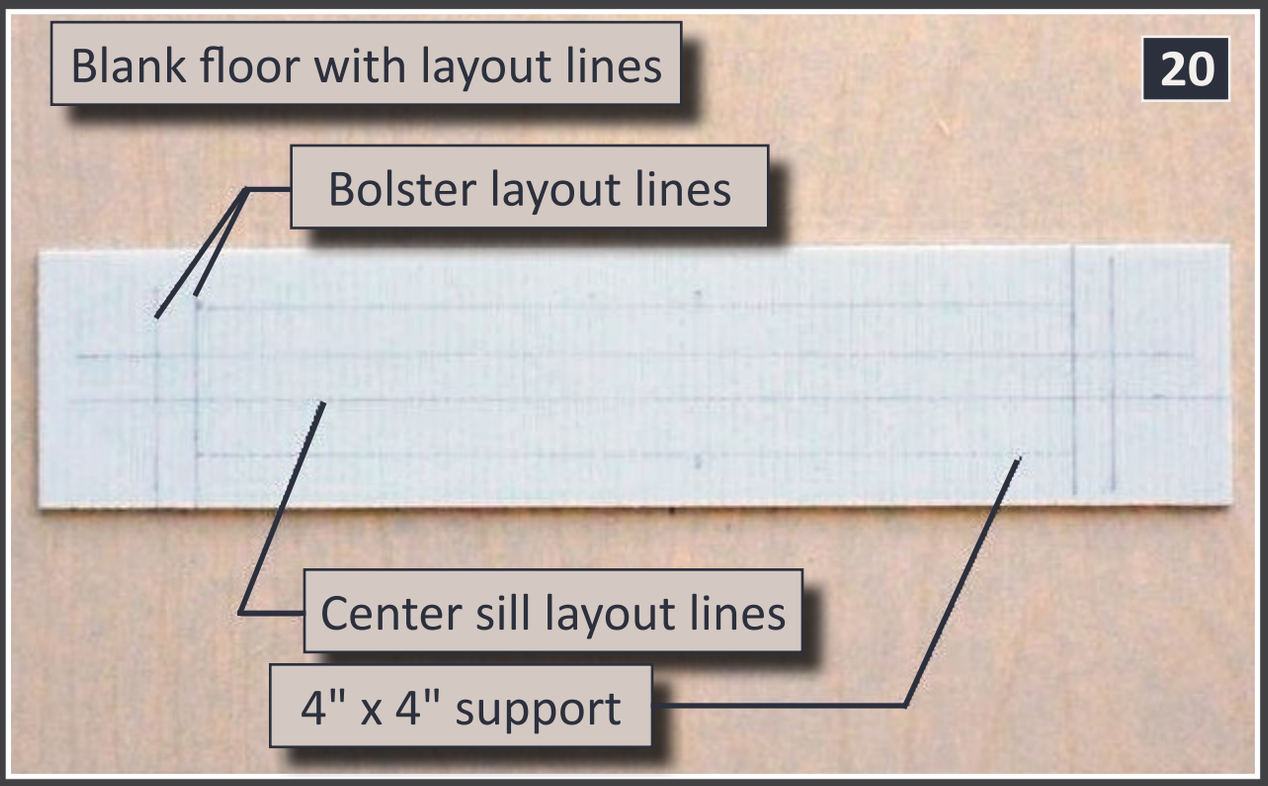
I had run out of Youngstown doors from my scrap box. What to do? I began looking at one of those awful Athearn doors with the huge claws at the bottom. Hum, if I remove the claws would it work? There would be nothing to lose.

So I removed the claws and sanded down the excess plastic to the height of the door rollers. The door ended up being the perfect height that I needed for the car. I was off to the races. One more and I was done.

Because the bottom track hangs slightly below the side of the car and is supported by tabs I did not add that detail to the master, but will add it on after the castings have been made.

The rivets were decaled on as on the previous cars but a single rivet was added to each tab with two rivets being added to the bolster tabs. This completes the car sides. Now it's on to the floors and underframes.

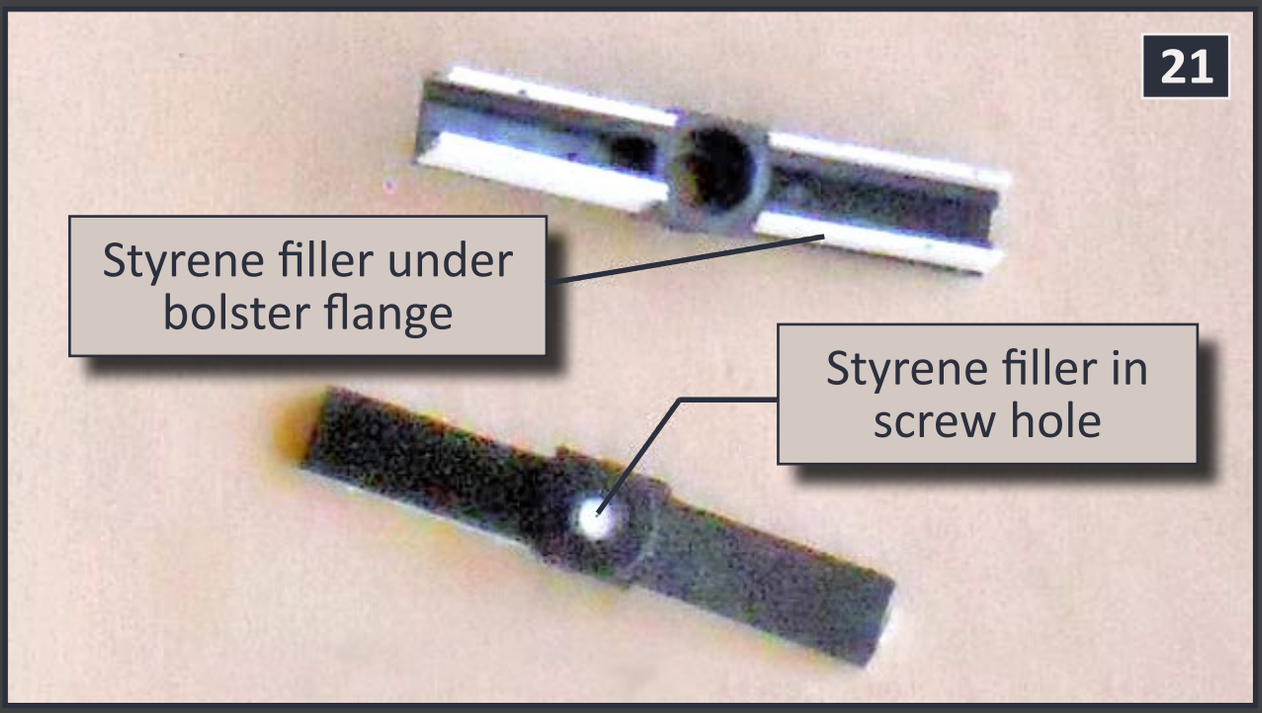
STEP 7: The Floor, Bolsters and Under Frame 75000 – 76499 Series



20: I began the floor assembly using .040 thick "V" groove siding. The siding spacing is .060 which is very close to 6". The floor was cut 9'-7" wide by 39'-8" long. You wonder how I came up with these dimensions? I cheated again. I copied the sizes from the Sunshine Models Erie kit as I had done before.

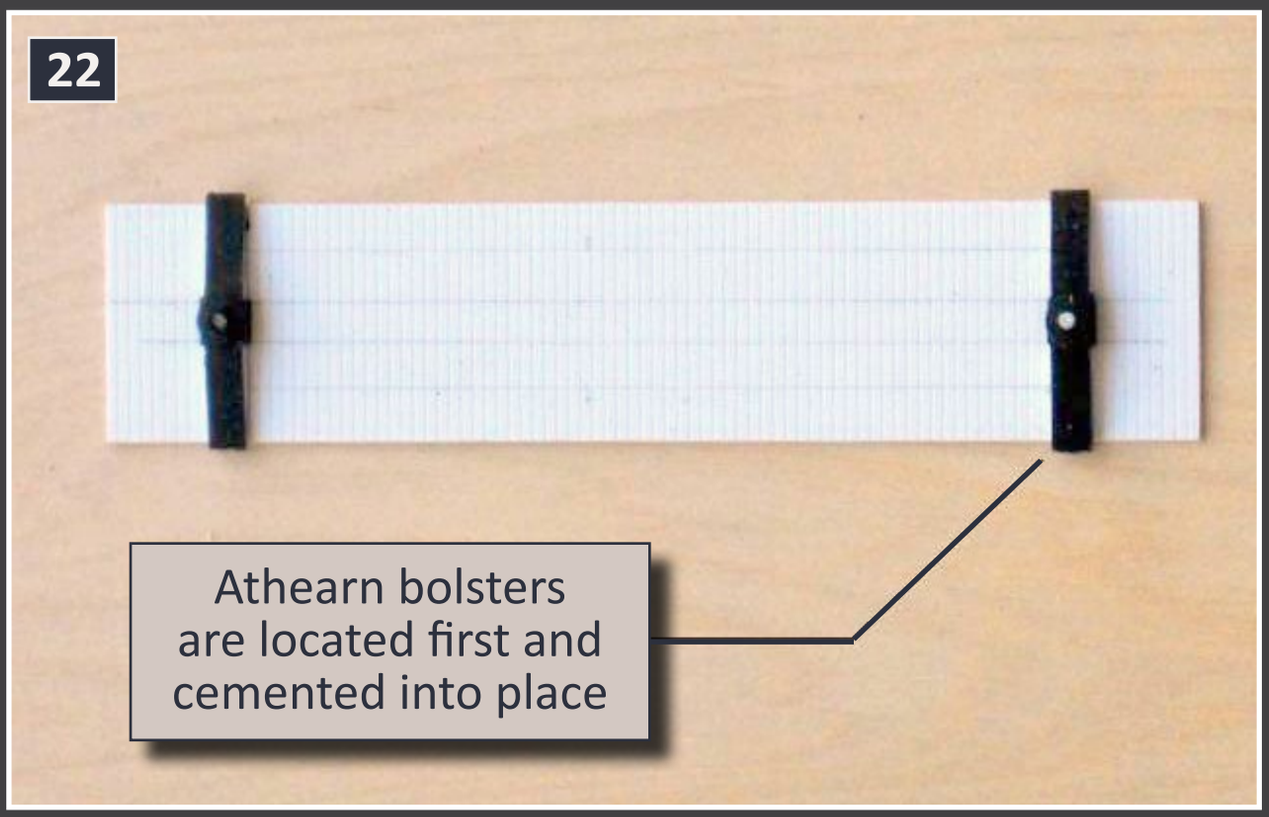
This is the blank floor with the lines laid out on it. I lay these lines out while the piece is still taped to the worktop. It's important to make sure everything is square; otherwise the car(s) will not track properly.

STEP 7: The Floor, Bolsters and Under Frame 75000 – 76499 Series
Continued ...



21: Since I did not want to attempt to scratchbuild the bolsters I attacked one of several old Athearn blue box kits (again) that I have laying around. The bolsters were separated from the frame and the area under the flange was filled in to make a smooth side. Since this will be one of the deepest parts of the mold undercuts are a major no – no.

Two scale 1” x 10” were cemented to the sides of the bolster on each quarter. A single 2” x 10” would have worked, but I didn’t have any on hand. I also cut a small piece of styrene rod to fill in the screw holes for the bolster. I left the rod just a little bit low so as to have a small dimple in the casting where I need to drill for the mounting screw in the future. While not shown in the picture, 4” x 10” styrene plugs were cut to fill in the openings on the end of the bolsters.



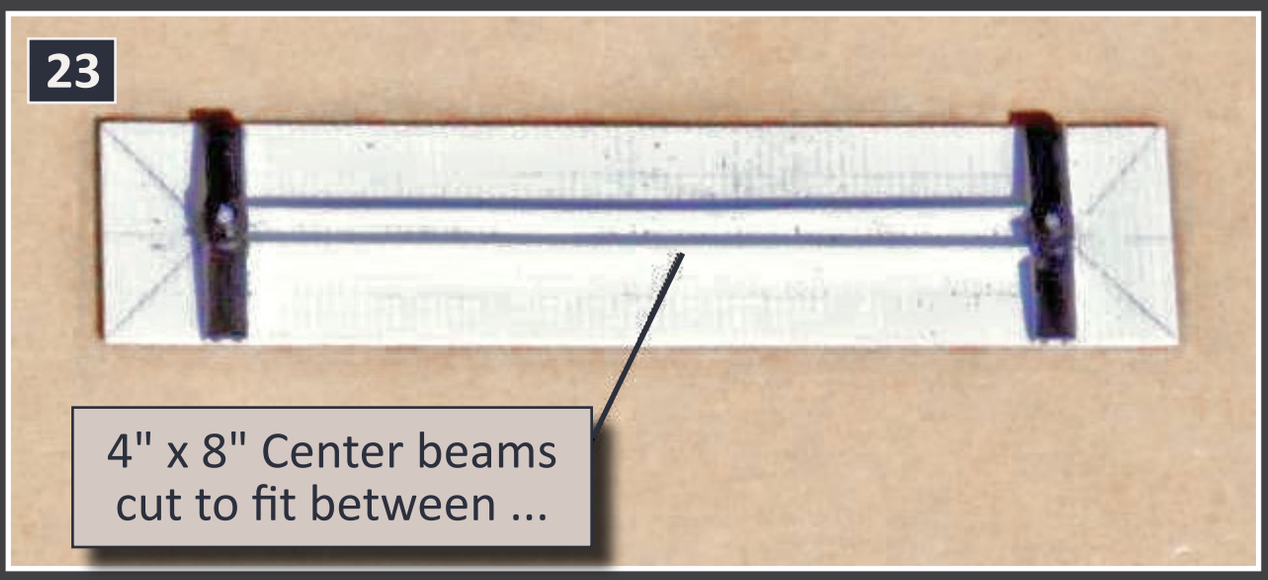
22: After the cement had set I trimmed all of the excess styrene so that it was flush with the bottom of the existing bolster. With that task completed the bolsters were cemented to the floor. The outside face of the bolster is located 3'-9" in from the edge of the floor. When finished the distance between the bolsters should be 30'-4" center to center.

You will notice in the photo that the Athearn bolsters are wider than the floor. That's OK; they just need to be trimmed down to match.

On the prototype the center sill is made up of two 12" I-beams. I cut 2 strips of 2" x 6" styrene to form the top flanges of the "I" beams. OK, I know these will not be seen, but I need the thickness since I only had 4" x 8"

stock for the body of the I-beams. I cut two strips of 4” x 8” styrene to fill in between the bolsters.

These form the body of the I-beams for the center sill of the car. I cut these to length to fit in between the bolsters. I personally find that it is easier to cut them just a little long, and then use the Northwest Short Line true sander to get a snug fit.



23: The bottom flange of the I-beam will be 2” x 6” styrene added after the floor has been cast. It seems much simpler to do this method because:

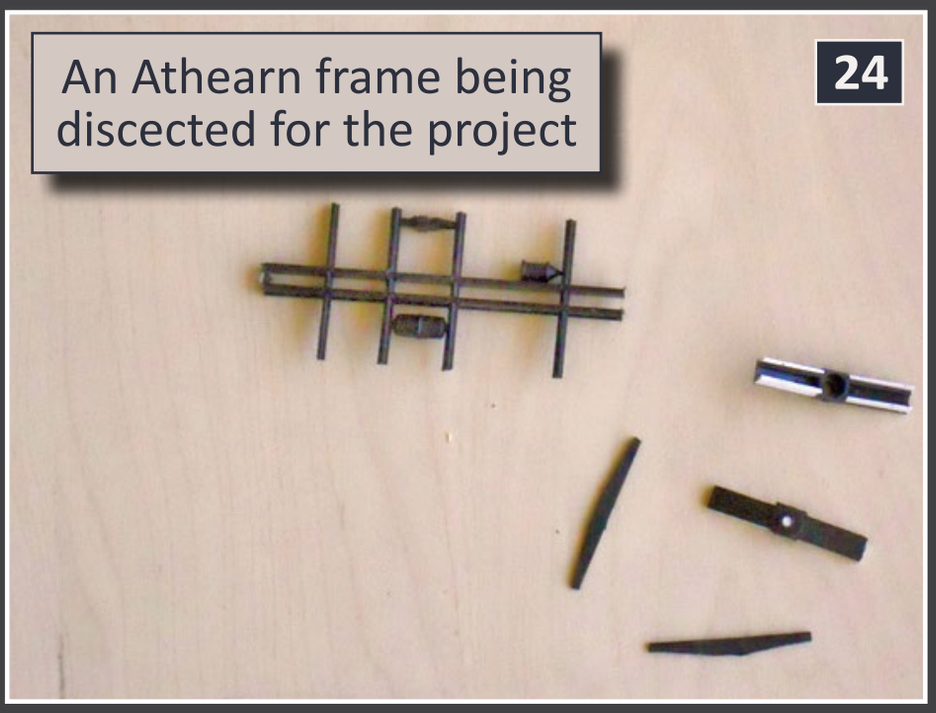
1. I don’t know if I could cast the part with an undercut that deep in the mold and successfully remove it from the mold.

2. I am not sure that the flange area would fill properly with the casting material.

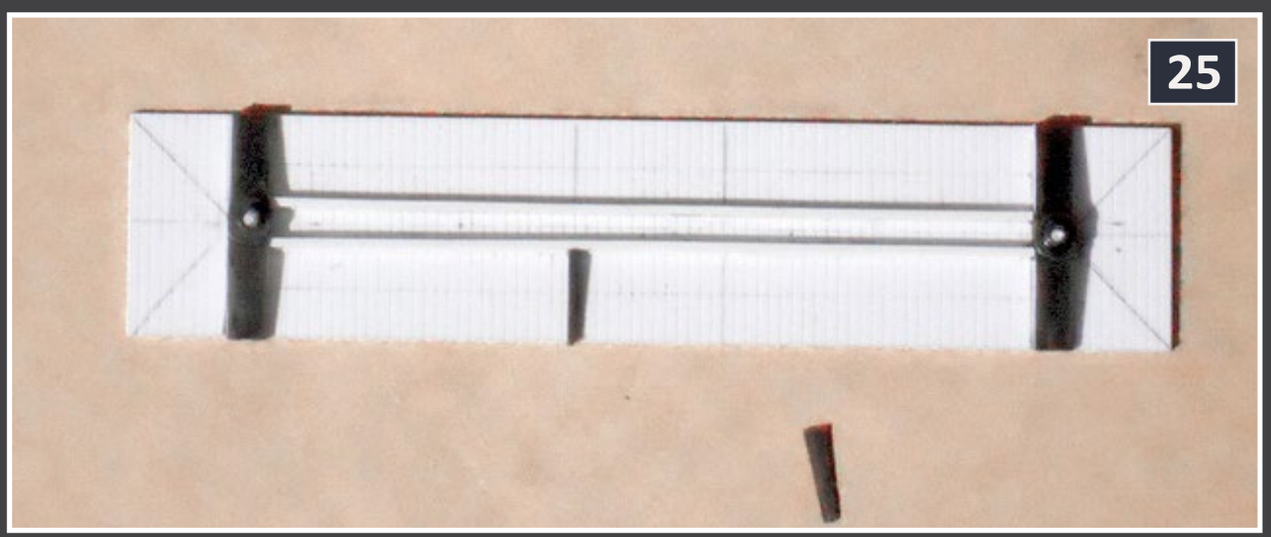
If I couldn’t cast it I did not want to figure out how to make a 2-part mold just to cast the bottom flange in with the rest of the floor.

STEP 7: The Floor, Bolsters and Under Frame 75000 – 76499 Series

Continued ...



24: Back to the sacrificial Athearn frame, the cross bearers were separated from the main portion of the frame, and the flanges were sanded smooth. Eight cross bearers are needed, four for each side.



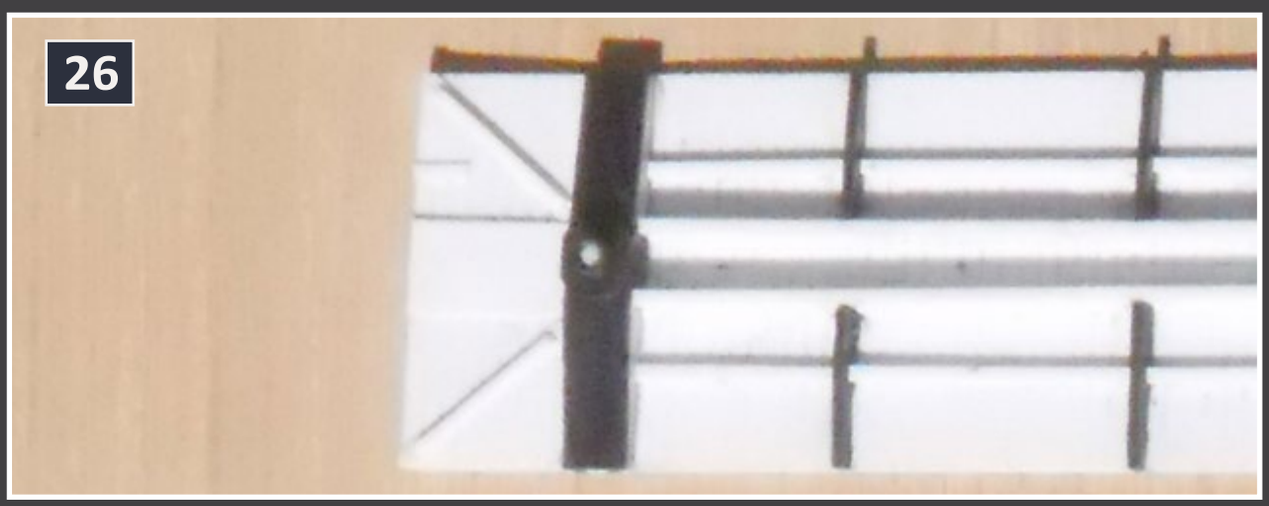
25: To locate where the cross bearers go, I studied the underframes of several kits and soon discovered no two were alike. So I took what seemed to be the most common features.

STEP 7: The Floor, Bolsters and Under Frame 75000 – 76499 Series *Continued ...*

I laid the side of the car next to the frame and marked where the doorposts are. Sets of cross bearers are located under each of the doorposts. Next I located where the second panel seam on each side of the door lines up on the floor. This is where the other sets of cross bearers are located.

A small notch needs to be cut out of the top flange of the I-beam so the cross bearers can sit flush with the floor. When cementing these in place I took time to make sure that these pieces were perpendicular to the floor. No leaning pieces are needed here.

The bolsters have been sanded down to fit. Two of the cross bearers from the Athearn boxcar have been cut to fit. The first has been cemented in place and the second is ready to be cemented. These cross bearers need to line up with the doorposts.



26: Finally, if you noticed in previous photos there are lines drawn at the ends of the car from the center-line to the corners of the cars, these were located incorrectly. What I ended up doing was to cut 8 pieces of 1” x 3” stock with a 45° bevel on one end.

STEP 7: The Floor, Bolsters and Under Frame 75000 – 76499 Series

Continued ...

I cut the pieces long so they extended over the edge of the floor. Two pieces laid side by side create the top flange of the channel. Once all of the pieces were in place I then trimmed them to fit the edge of the floor. When finished you should end up with a top flange that is 6” wide.

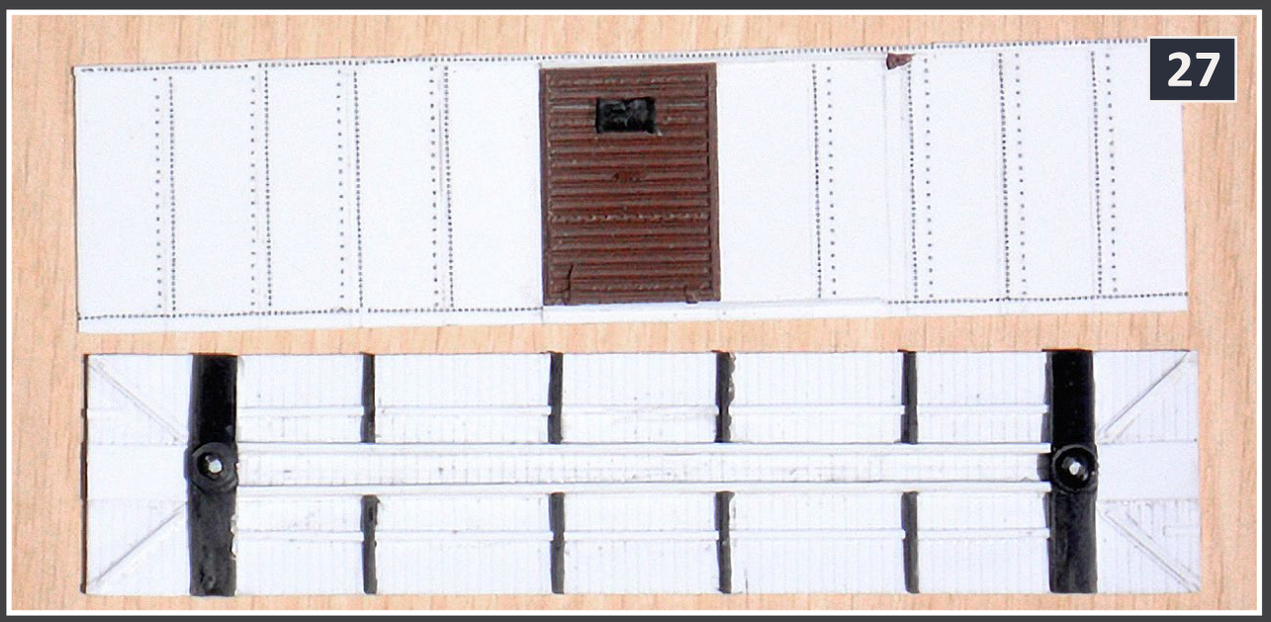
Four pieces of 4” x 4” stock were cut to a length of 4’. These pieces were then centered over the 1” x 6” flange and cemented into place. After the cement had dried, the 4” x 4” pieces were beveled at a 45º on each end. No fancy measurements, just an educated guess at the angle.

Finally, Photo 27 is a view of part of a completed under-frame. The stringers are 4” x 4” stock cut to fit in between the cross bearers.

Reader Feedback
(click here)

Don Hanley is the Assistant Editor for MRH, and is interested in the Erie Railroad, specifically the Huntington, Indiana area during the 1950s. Don has had numerous articles published in Mainline Modeler and MRH magazines describing various structures and rolling stock detailing projects.

STEP 7: The Floor, Bolsters and Under Frame 75000 – 76499 Series *Continued ...*



27: The finished frame is set adjacent to one of the car sides. This provides a good visual of how the cross bearers line up with the door posts and the seams on the car. Now that the floor is finished I compared the sides with the floor to make sure that they were all the same in length. They weren't, which wasn't much of a surprise.

I took the shortest piece, one of the sides, and placed it in my Northwest Short Line true sander. This part set the length that all of the other pieces would be sanded down to. This is a necessary step to make sure that the cars will be square and all of the parts line up once the cast pieces are put together.

This ends part 1. In part 2, I finish up the process by discussing how to do the different car roofs and ends. Then I will go through the casting process and the construction steps so you can see how to build any sized fleet you want of these Erie cars. ☑

Yes, it's a model

Model Railroad Hobbyist's monthly photo album

Reader Feedback
(click here)

1: Guy Cantwell caught this Sierra Consolidation rolling into Groveland on his Willoughby Line layout. Guy says:

"John La Barba painted and weathered this brass loco, a Westside model of Sierra #24. The white building is a Rio Grande Models kit and I scratchbuilt the grey warehouse in the background from the hay warehouse at El Portal on the Yosemite Valley Line. For the ground cover I used real dirt that I sanded to bring up the dust and then colored with Bragdon's powders."

2: Mike Confalone sent along this photo, with these comments:

“Here's a bird's-eye view of Western Maine Railroad Alco RS11 7605 (former PC) as it approaches White Mountain Jct. on the Allagash Androscoggin Sub in April 1980. The Western Maine is a shortline that has assumed operation of the former Allagash White Mountain Branch. It's a one-horse railroad with 7605 as the marginal shortline's sole power. The Allagash main runs on the other bank of the South Branch Sandy River. There was a wash-out here last spring, hence the rip-rap on the embankment.

“The 7605 was a Penn Central custom job done by modeler Jim Six many years ago and was featured in one of the magazines (maybe *Prototype Modeler*). It ended up with Jim's friend Mike Rose and was recently brokered to the Allagash and then to the Western Maine. It still wears the original PC white number on the cab.” (There's a jumbo version of this photo on the next page.)


CP Rail
CP Rail

3: Joey Ricard recently posted this photo on an MRH website Weekend Photo Fun thread. Joey describes his model:

“This is a Bachmann On30 Porter 0-4-2 kitbashed with a scratch-built tender made from an HO gondola. The tender uses HO scale freight car trucks that have additional electrical pickups to all wheels. The tender houses a Soundtraxx Tsunami TSU-750 decoder featuring light steam sounds. I also placed a small rectangular speaker inside the tender.

“I took this photo on my On30 mini layout called "Spruce Coal and Timber Railroad" set in the early 1900's in the West Virginia woods. The layout is DCC-controlled and features handlaid track, powered turnouts, scratchbuilt structures and a re-positionable photo-realistic backdrop.”

4: Kevin Packard's Santa Fe loco (restenciled BNSF on the cab) caught our eye and we asked about it. Kevin responded:

“I chose to model BNSF #8625 because it is one of the last dash-8's in the yellow and blue Santa Fe scheme, and because it has such interesting weathering. It's a modified Atlas: the steps, lights, pilots, cab, and underframe all received attention.

“The weathering was done by fading with an airbrush using a mix of acrylic colors, then doing a pin wash around all the doors for the grime build up, mixed acrylics for the rust spots on the cab and the nose, acrylics for the burn damage, oils for the handrails and the fuel tank, chalk and oils for the roof, and a mix of oils, airbrush and chalks for the underframe/pilots.

“The model was a lot of work, but I'm happy with the way it turned out. It's one of my favorite loco projects and it's a good runner to boot.”

Thanks, Kevin. Looks like you just put a real loco into a reducer!

Playback problems? Click to try a different version.

5: Here's a first for our *Yes, it's a model* photo feature: a video. James McNab modeled a grade crossing on his layout, all the way down to the details of how the train must follow certain safety procedures to cross this street, NW 86th. James says:

"This video of my IAIS Grimes Line layout details the involved and often tedious process of crossing NW 86th Street in Clive, Iowa. With stop boards located on both sides of the crossing all trains must stop and ensure protection is active before proceeding.

It's a process that can tie up traffic on NW 86th, especially when *The Tramp* local switches Chicago Bridge & Iron on the PDM Spur.

Modeling this procedure is a key element to the operating plan for my layout, and required selecting an era for my layout when this equipment and procedure was in place."

Nice job, James. It's a great example of how modeling the prototype down to the proper procedures can make a layout more fun. It just feels like the real thing *ought* to feel. Here's the MRH website thread discussing this video: mrhmag.com/node/13132 ...

6a and 7a: Tom Johnson regularly posts images of his layout, rolling stock, and locos on the MRH website in his blog. Tom says:

"These models are the Exactrail PS4427 low hip hopper. I weathered them using a combination of an airbrush and some brush painting."

To view Tom's MRH blog, see: mrhmag.com/blog/tom-johnson

To view these photos in jumbo size, see the next two spreads.

6b: You have to admit, this is one realistic looking HO covered hopper. Tom describes how he achieved the realistic weathering:

"I started the weathering process on this hopper by spraying an overall faded color using my airbrush. I used very thin Floquil Rail Tie Brown for my fading color (20% paint and the rest thinner and Dullcote). I like mixing some Testor's Dullcote with my thinned weathering colors. My airbrush seems to spray better with some Dullcote mixed in.

"I spattered the rust spots onto the side of the car by hitting a paint brush loaded with a dark rusty brown color of paint against a paint brush handle. The smaller rust spots were made by spattering with my airbrush. I do this by barely pushing down on the air button. It

takes some practice but it's easy to get the hang of it. I did the rest of the weathering with thinned oil washes and oil dry brushing for the rust streaks.

“I like to spray a coat of Testor's Dullcote after each weathering layer to protect it and prevent that muddy look. I finished the model by spraying the ribs with a thinned dark weathering color (usually Rail Tie Brown), spraying splatters on the outside hopper bays from the wheels, and the wheel splash on the ends. I wiped the ribs clean with a Q-Tip soaked with thinner, which leaves a nice dark color along both edges of the ribs but not on top of the ribs.

This isn't all ... go to the next page for more from Tom ➔

7b: Here's another of Tom's covered hopper weathering jobs on a different ExactRail PS4427 low hip hopper. Tom says:

"The yellow hopper was done the same way as the gray hopper. I used a different faded weathering color on this car: white with just a small amount of yellow mixed in with the rest being thinner and Dullcote. Again, about 20% paint and the rest thinner and Dullcote. I like to start with 20% paint most of the time and then add more if it's too thin.

“Again, I wiped the ribs clean with a Q-Tip soaked in thinner. I'll go back and add some rust spots on the ribs (I don't always do this) and go over them again with my thinned fading color so the ribs don't stand out too much.

“I weather using random photos (not always of the road name modeled) for reference. I also weather per the mid 80s with little to no graffiti. Not a lot of rust buckets in the mid 80s. I use mostly Tangent and Exactrail hoppers, with a few from Intermountain.”

Not exactly a model photo, but we couldn't resist this picture of Paul Krentz working on his Norfolk and Western layout. Eventually, Paul says, this area will be covered with a mountain, but for now, "I just found it easier to get on top of the layout to work here."

Reader Feedback
(click here)

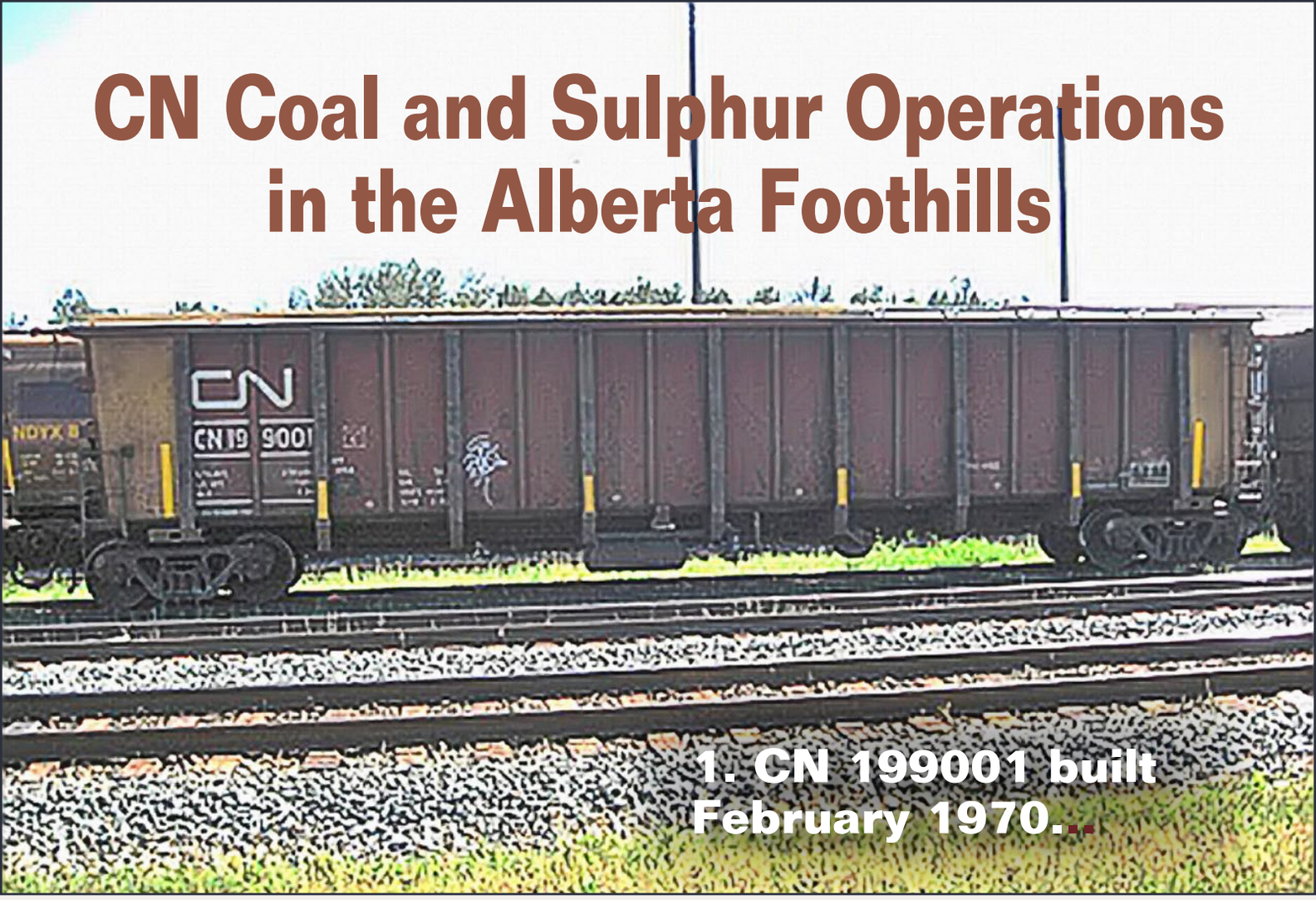
Get your photo here!

Our *Yes, it's a model* monthly photo feature presents some of the most inspiring modeling and photos from the MRH website. If you'd like to get *your modeling* in our photo feature, just start posting your photos on the MRH website, especially in the **Weekend Photo Fun thread** created each weekend.

Many of the photos posted show HO modeling, but we'd like to encourage modelers in other scales to post on the MRH website as well. We don't want this to just be an HO photo feature!

For info on how to post photos to our website, **see this help how-to**. You need to be an MRH subscriber to post photos to our website, and becoming a subscriber is free, **just fill out this form here**.

CN Coal and Sulphur Operations in the Alberta Foothills



1. CN 199001 built February 1970...

– Norm Skretting

Model Photos by
Timothy J. Horton,
remaining photos by the author

Reader Feedback
(click here)

Learn about coal and sulphur operations, and the gondolas used to haul these commodities ...

In this article, I take an in-depth look at the 4000 cu. ft. gondola used by Canadian National Railways from the early 1970s up to the current time. Prior to switching to aluminum equipment, CN had well over a thousand leased or owned instances of these cars in service during the 1970s, 1980s and 1990s. Sultran also had 360 cars of its own that operated on the Canadian National and the Canadian Pacific.

I am excited about the arrival of HO scale 4000 cu. ft. coal/sulphur gondolas from North American Railcar, and am eagerly looking forward to running them on my model railroad, a loose representation of the CN's Clearwater Sub from the 1970's to the current time. I enjoy all of the years in between, but my fondest memories are from the 1970's and 1980's when these cars were the backbone of CN's coal operations.

Coal Service

The 4000 cu. ft. gondola was the preferred car style of Candian National for transporting coal from five Alberta mines to either the west coast ports for export or to ports on Lake Superior (Thunder Bay, Marmion Lake) for use by Ontario Hydro.

The first cars were built in 1970 for CN as CN 199000-series, and the first eight in the series were built as double-rotary cars with a rotating drawbar on each end. The cars had a capacity of 263,000 lbs. and a light weight of about 58,000 lbs., giving them a load limit of approximately 205,000 lbs. These cars could carry a cargo of 100 tons with a little room for overloads. When the maximum capacity was increased to 286,000 lbs., all of the coal cars had the load limit increased by 23, 000 lbs. (The SULX cars kept their original load limit).

The cars also had a load-empty feature that increased the braking capacity of the cars when loaded, similar to a retainer (2). The purpose was to reduce the brake pressure when the cars were empty in order to reduce the number of skidded wheels while providing sufficient braking capacity when loaded.

With the beginning of unit coal train service and the promise of other unit train operations such as sulphur, potash, and grain, CN began a plant expansion program of extending sidings to a minimum of 6050 feet in order to handle trains of 6000 feet.

Neptune Terminals in North Vancouver, the only coal unloading terminal on CN at the time, was also restricted to handling trains of 6000 feet, or about 98 coal gondolas plus engines and caboose. Eventually the train length was increased to 100 coal gondolas or any other car of similar length.

Neptune Terminals only handled coal from Luscar mines at Cardinal River and Coal Valley, as well as the mine at Winniandy, both in the foothills of the Rockies in Alberta until the Obed Mountain mine opened in 1984.

When CP began shipping coal from southeast BC, a new super port at Roberts Bank was opened (3). All trains originating

2. Load-empty feature – Newer cars had the same feature that was mechanically-applied when the car was loaded. Norman Skretting photo.

3. Roberts Bank Coal & Container Terminal.

from Gregg River and some trains originating at Coal Valley and Obed Mountain (Dalehurst) on CN also unloaded at Roberts Bank. Track length at Robert's Bank did not limit train length, but siding capacity on CN did, so CN's trains were always shorter than CP's.

Ridley Island, near Prince Rupert, was developed to handle coal mined in Northeastern BC, (4) and the trains were designed to operate in the same manner and length as coal trains from Alberta on the mainline.

All port terminals used rotary dumpers which necessitated the use of rotary coupling systems on the cars. The rotary coupler end of the car was indicated by a yellow stripe or stripes on that end of the car. Double rotaries had a yellow stripe on both ends (5), as well as two air hoses, one on each side of the

drawbar (6). This made it easier to couple the train line to cars on either end as well as avoided twisting the air hose around the drawbar while being dumped.

4. Ridley Island Terminal (Prince Rupert, B.C.).

5. North American Railcar- CN Double-Rotary Marked HO Scale # 11-31004002, N Scale # 11-11004002.

6. Two sets of train line hoses on each end of a double rotary. Norman Skretting photo.

The railroads serviced coal trains in the empty direction, and the location of servicing changed with the different service plans developed by CN for its terminals. Replacement of brake shoes and inspections changed between Thornton Yard, Kamloops and Jasper for west coast trains and Winnipeg and Edmonton for the Ontario Hydro trains.

Spares filling out the trains to the correct number of cars were also added at these terminals and could require turning cars to correctly orient the rotary drawbars. Bad orders would be switched out at any location, depending on the severity of the defect. The sulphur trains were also serviced in the same manner.

Coal loading

All of the coal mines (8) on CN prepared the coal in a similar fashion. The coal was pulverized before being stockpiled and loaded. The mines sprayed each car with a latex spray to reduce the risk of coal dust blowing out of the cars (9).

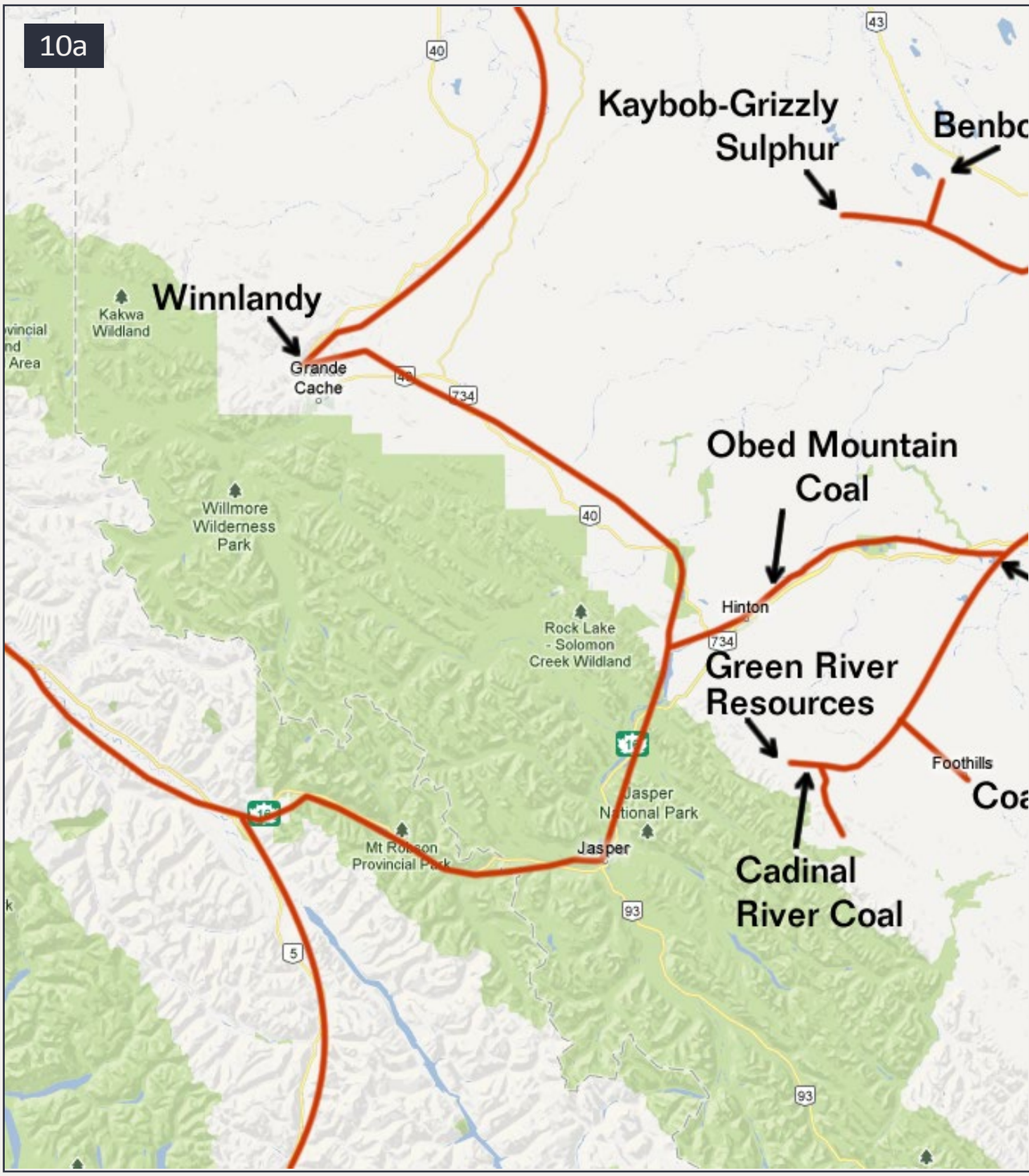
Each loadout used a hopper scale to weigh the coal before it was loaded into the cars. All locomotives on coal trains needed to have operating pacesetter equipment, allowing the trains to move at extremely slow speeds (typically 0.25 MPH), a requirement of the loadout operator. Frequent stops to fill the loadout hopper were common and unpredictable.

CN assigned a lot code to each train depending on origin and destination which increased numerically with each train loaded through the end of the year. Each set of equipment would have the current lot code as well as a tentative next lot code as assigned by the coal/sulphur coordinator. Figure 10 has a map of the coal mines and sulphur loading points – I discuss each one in some detail in the following text.

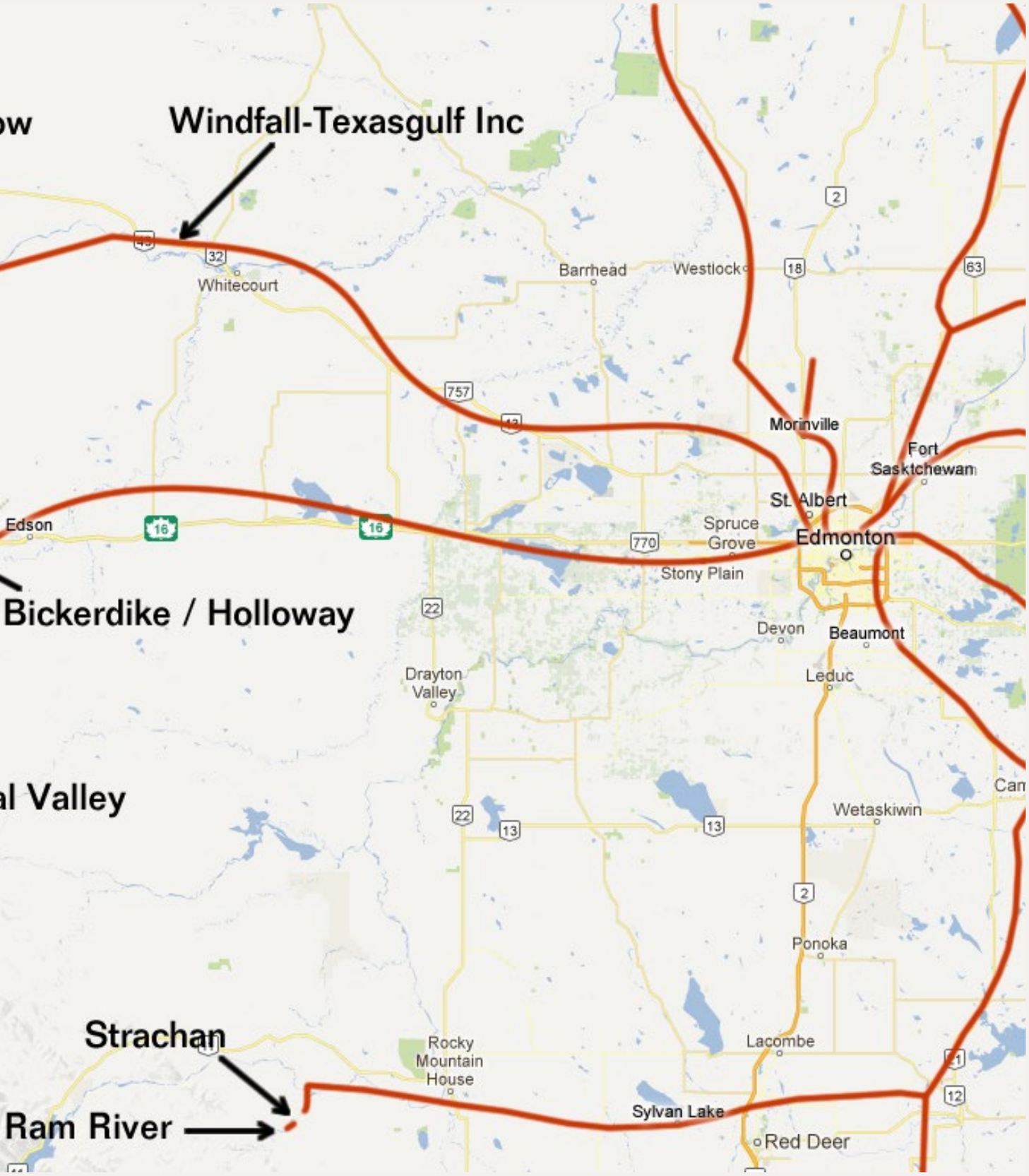
7. North American Railcar – CN HO Scale # 11-31003004, N Scale #11-11003004.

8. Coal loading facility.

9. Coal load being sprayed with latex to reduce dust.



Coal Mines and Sulphur Loading Points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Beaumont
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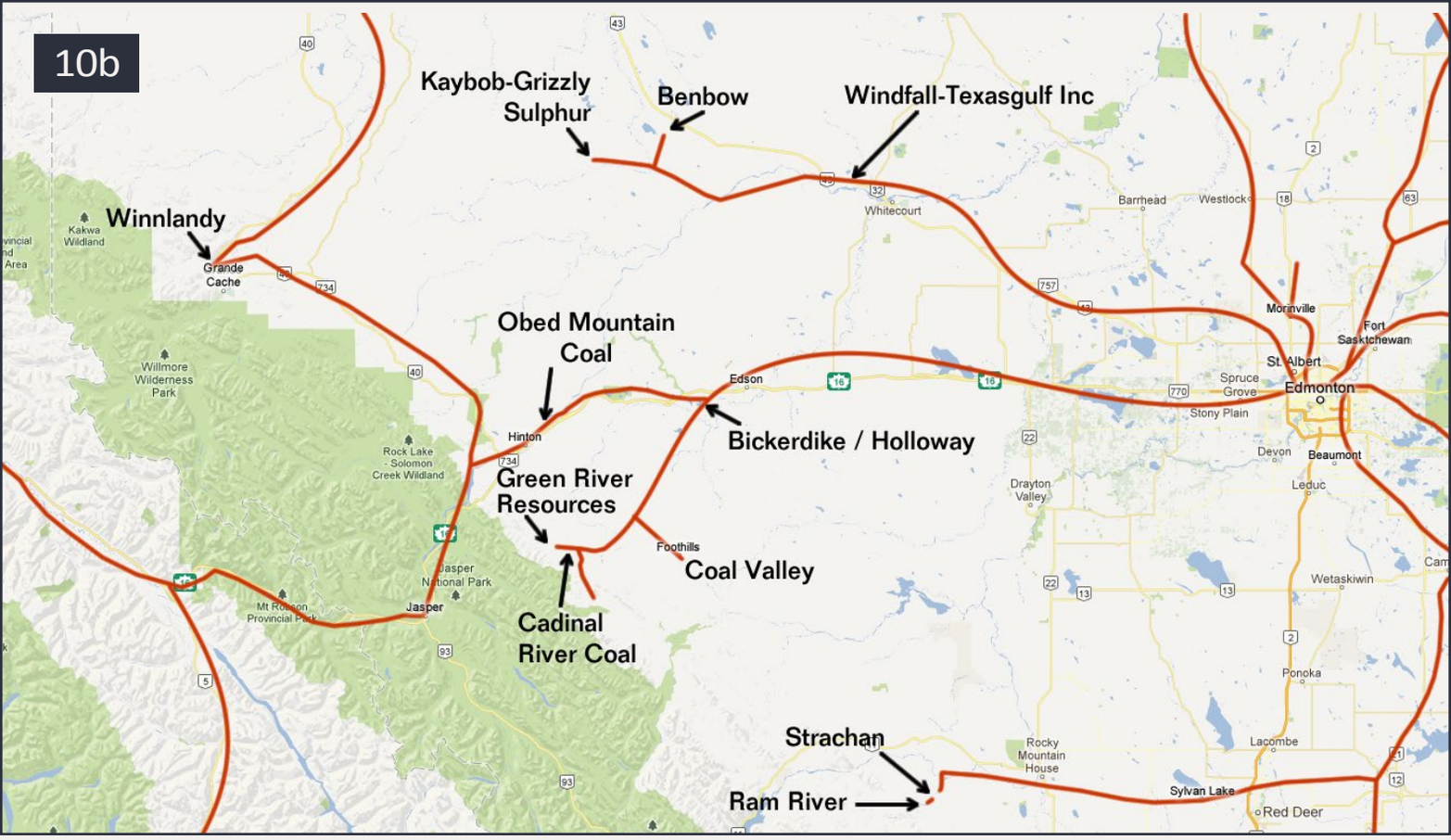
Strachan
Rocky Mountain House
Lacombe
Sylvan Lake
Red Deer
Ram River



10b. Coal mines and Sulphur loading points.

Winniandy – Mile 108.9 Grande Cache Sub (Lot code SN-001, SN-002, etc.)

The first mine is at Winniandy (54°00’24.83”N 119°06’21.01”W) on the Grande Cache sub about 25 miles north of Grande Cache, Alberta. The coal produced from this mine is a high quality metallurgical coal. The mine was originally operated by McIntyre Porcupine Mines Limited (then Smoky River Coal), and they shipped coal to Japan via Neptune Terminals in North Vancouver.

The trains were operated in 98 car-sets that included one double-rotary car located on the end of the train. Without this important car, either the engine, caboose or coal car would suffer a broken drawbar or yoke when the coal car was turned to unload it.

The cars used were 4000 cu. ft. gons in the UNPX 100000-series and had a placard placed on the side of the car near the middle

11. UNPX 100259 leased by McIntyre Porcupine Mines Limited at Winniandy. Rick Walker photo.

with the McIntyre Porcupine Mines Limited name and logo applied (11).

These cars have been renumbered and rebuilt, but can be recognized by the large plate welded over three side panels. I first saw these trains in 1972 while working on a gang in the Fraser canyon at Falls Creek on the Ashcroft Sub. This paint scheme is currently not available from North American Railcar Corporation.

The mine at Winniandy was costly to load at because it required a five-man crew from Jasper including two engineers and five dynamic-brake, pacesetter-equipped locomotives (SD40, SD40-2). Power requirements changed as units increased in horsepower. At least one of the engineers was required to be on duty at all times. One engineer would run from Jasper to Winniandy, and then go to bed; the second

engineer would deadhead on the train and then go on duty to load the train.

When the train was loaded, one engineer would run the train with three units on the head end and the second engineer would push the train from the tail end from Winniandy to Jasper. In 1975, while working on a ballast-dumping gang (cable gang in CN terminology), our train crew was required to push a coal train from Winniandy south to Denard because it did not have sufficient power.

The loadout at this mine can be unpredictable and may take more than 10 hours, and varies based on loading the train from the stockpile or direct from trucks and Caterpillar loaders. The train runs under the loadout on arrival so that the inside of the cars can be inspected. Except for removing the caboose and changing ends with the locomotives, operators usually did not split the train.

Eventually cars supplied to this mine came from the general coal car pool, which included UNPX and CN cars (all being produced by North American Railcar Corporation), although the ex-CNHX cars did not get used until the contract with Ontario Hydro expired. As discussed further in the section on sulphur, SULX 2000-2359 series cars ran in solid sets and loaded coal at any mine in Alberta. Whenever the mine loaded trains destined for Gary, IN, they used cars from the US and those cars could have been either steel or aluminum.

Cardinal River Coal – Mile 4.8 Luscar industrial Spur (Lot code LN-001, etc.)

The second mine, located at mile 4.8 on the Luscar Industrial Spur, is near Leyland/Cadomin on the Mountain Park Sub. This mine originally loaded coal destined for Japan in brown CN 199000-series cars in 98-car sets. As with Winniandy, the

12. CN (ex-Procor) built by Hawker Siddeley .

13. North American Railcar – CN (ex-Procor)
HO Scale # 11-31006004, N Scale # 11-11006002.

mine used UNPX and CN cars (all coming from North American Railcar), although the ex-CNHX cars were not used until the contract with Ontario Hydro expired (12, 13).

BCNE cars (14) could also be found when not required in BC for the Teck and Quintette mines. As discussed further in the section on sulphur, SULX 2000-2359 series cars ran in solid sets to load coal at any mine in Alberta. These trains also unloaded at Neptune Terminals in North Vancouver.

Because of very steep grades, loading at this mine and at Gregg River Resources Ltd. required the trains to be split at Holloway. The first cut would leave with 44 (later 45) cars, three units (SD40, SD40-2), and one caboose. The units required dynamic brakes for the grades and a pacesetter for loading. The Edson

crew would load the first cut and then await the arrival of the second cut at Leyland. The second cut would leave Holloway with 54 (later 55) cars, two units, and one caboose.

The crews would exchange motive power at Leyland, so the first cut would leave with two units, 44 loads, and a caboose, and the second cut would go up to Cardinal River Mines to load. When finished loading, the crew proceeded back to Holloway with three units, 54 loads and a caboose, where they would make up the train with three units, 98 (later 100) loads, and a caboose (provided the crew did not run out of time).

14. North American Railcar – CN (ex-BC Rail) HO Scale # 11-31003001, N Scale # 11-11003001.

15. North American Railcar – CN (ex-BC Rail) Double Rotary Marked – HO Scale #11-31003003, N Scale #11-11003003.

Without dynamic braking, this coal train would not have run safely. A Jasper crew would take the train to Jasper on the Edson Sub. Once again, a double-rotary car was required for unloading, so the crew was responsible to make sure that it got included and placed on the correct end of the train (15).

Spot market sales also saw trains loaded for Roberts Bank, but the loading operation was the same, as were the cars. Modern operations have changed with the advent of SBU's, aluminum cars and higher horsepower locomotives.

Gregg River Resources Ltd – Mile 7.1 Luscar Industrial Spur (Lot code GR-001, etc.)

This was a similar operation to Cardinal River Coal. The mine closed in the late 1990's. However, Gregg River shipped the majority, if not all, of its coal to Roberts Bank.

Luscar-Sterco-Coal Valley Mines – Mile 48.5 Foothills Sub (Lot codes, H-001, S-001, Y-001)

The majority of the coal from this mine was shipped to Ontario in train sets and locomotives paid for by Ontario Hydro. There were typically three 98-car sets of CNHX equipment operating at one time, although sets could be stored if Ontario Hydro did not need the coal. North American Railcar Corporation produces these cars, although they are painted in their post-CNHX scheme (16). Once again, a double-rotary car is required for each set.

Loading was somewhat different because of less-severe grades going to Leyland. The entire train left Edson with four units (F-B-F-B), 98 (later 100) cars, and two cabooses. The first crew

began loading on arrival and left with two units, 49 (later 50) loads, and a caboose. They took the first cut to Holloway and deadheaded home to Edson.

The second crew deadheaded to Coal Valley and finished loading and brought the second cut of two units, 49 (later 50) loads, and a caboose to Holloway. There they made up the train as four units, 98 (later 100) loads, and two cabooses, and took the train to Edson. At Edson, an Edmonton crew would take the train on to Edmonton.

The only time other cars got used was if the mine loaded a train to either Neptune Terminals or Roberts Bank. They used the same loading pattern, but the train would quite often leave

16. North American Railcar - CN (ex-Ontario Hydro) HO scale # 11-31004001, N scale # 11-11004001.

17. North American Railcar – SLUX (2 line) HO Scale 11-31005001, N Scale 11-11005002.

with only three units and one caboose. The cars would come from the general coal pool, so any UNPX or CN car, or solid sets of SULX cars, (17) could be found in these trains. BCNE cars could also be found when not required in BC for the Teck and Quintette mines.

Obed Mountain Coal Co. Ltd. – Mile 172.9 Edson Sub (Lot codes DN-001, DR-001, DT-001)

Located more than 10 miles from the CN mainline and the loadout, this newest mine in Alberta produced the poorest quality coal.

Cars would come from the general coal pool, so any UNPX or CN car, or solid sets of SULX cars, could be found in these trains. BCNE cars could also be found when not required in BC for the Teck and Quintet mines. A double-rotary car was required.

Jasper crews loaded these trains, which they did not split for loading. Coal from this loadout went either west or east. Because higher-horsepower units had entered service when the mine opened, the trains typically operated with only two units back-to-back.

BCNE Coal service (Lot codes TR-001, QR-001)

I will not discuss the operation of coal trains on the BCR to the Teck and Quintette mines, but the BCNE cars (produced by North American Railcar Corporation) were originally used in 98-car sets including a double-rotary with a CN caboose. These cars ran as pure sets for a number of years, but they too ended up being used on any steel train set in Alberta and British Columbia as required by CN. These cars now run in coke service, along with other types of steel cars.

Coke service

Most of the remaining steel cars of this design in revenue service now run in coke service from Fort McMurray, Lloydminster and Clover Bar to Ridley and other various destinations. Double rotaries are not required, but a few still remain. As of summer 2012, two ex-CNHX, two CN 196-series, and four CN 199-series double-rotary cars remain in operation. The balance of the cars have been demoted to OCS (On Company Service), sold, or retired.

18. Procor UNPX 102037 built by Hawker Siddeley in June 1975.

19. North American Railcar – Procor UNPX – HO Scale # 11-31006001 N Scale # 11-11006001.

Sulphur service

As large gas plants in Alberta began to accumulate large stock-piles of solid sulphur, the gas companies formed a sulphur marketing group, called Sultran, charged with selling this form of sulphur to the world market. A by-product of the natural gas refining process, the liquid sulphur gets either poured into huge blocks or pelletized (prilled) and stored at the gas plant until required by Sultran to fill any sales.

There were/are three sulphur loading gas plants northwest of Edmonton on the Sangudo Sub at Windfall, Benbow, and Kaybob. In addition, there are two sulphur-loading gas plants on the Ram River Sub west of Red Deer near Rocky Mountain House at Ram River and Strachan, and one plant at Bryan Spur on the Foothills Sub southwest of Edson.

Each gas plant has/had a flood loader capable of loading 100+ car unit trains made up of Sultran's bathtub and 4000 cu. ft. gondolas. Loading of an entire train can take as little as five to six hours or two days, depending on the loadout capabilities of the plant and the frequency of mechanical breakdowns.

Some of the first trains to operate in sulphur service made use of various types of CN-owned or leased equipment. UNPX 102000-102299 and UNPX 102300-102599 series 4000 cu. ft. rotary-coupler-equipped cars got used in sets of 82 cars (18). These cars got fitted with the unique Procor sign (19), or with the newer Word Mark style of PROCOR printed in large letters across the left side of the car (20). These cars came from the coal pool and most had a lining applied to reduce the corrosive effect of the sulphur. North American Railcar is producing both of these versions.

20: North American Railcar - Procor UNPX (Word Mark) – Built by Marine Industries 1975

HO Scale # 11-31006006, N Scale # 11-11006006

CN also supplied railway-owned equipment, which included 105-car sets of three-bay hoppers from the 320-series. Many of these cars later got rebuilt and had their hopper doors sprayed with a foam material to reduce leakage, then renumbered into the 327000-series.

Cars from the higher-sided, outside-ribbed 326000 series supplemented these rebuilt cars. CN also owned a quad hopper in the 330000 series that ran in groups of 88 cars.

The reason for the shorter length (5100 ft.) of these trains came from the restriction at the Sapperton, BC interchange with CP. Sapperton is just north of the BN yard in New Westminster on CP. Trains to Sultran's facility in Coquitlam had to be interchanged with CP and power and cabooses did not run through.

When the siding at Sapperton got lengthened, train length increased to 104 cars. CN crews handled trains destined for

20. North American Railcar - Procor UNPX (Word Mark) – Built by Marine Industries 1975 HO Scale # 11-31006006, N Scale # 11-11006006.

21. North American Railcar – Sultran SULC (3 Line).

Vancouver Wharves in North Vancouver for the entire trip. Vancouver Wharves personnel performed the unloading, coordinating this job with the unloading of potash trains.

Sultran purchased its own fleet of cars to ensure that their product could move to market. Their first cars (SULX 1000-16??) got built to a similar design as the coal fleet of CP and came equipped with rotary couplers. CN and CP shared the use of these cars as requested by Sultran, and ran on CN as 82-cars sets until sidings and unloading facilities could be lengthened.

Many of these cars have been damaged in derailments and retired because of twisted frames. These cars are produced by Intermountain and are available in two different paint schemes.

When the sulphur market picked up in the 1980's and CN's older equipment grew closer to retirement, Sultran ordered 4000 cu. ft. cars similar to the Procor cars (21), but with only two ribs on the end. By the time these cars (SULX 2000-2359) arrived, the sulphur market had dwindled considerably.

However, CN was desperate for equipment to move larger amounts of coal. CN reached an agreement with Sultran to use

one or two solid 100-car sets of these newer cars to haul coal. One unfortunate drawback was that heating the coal loads damaged the interior liners, forcing the lining to be re-applied on some cars.

For quite some time, the 4000 cu. ft. SULX cars have been mixed with the SULX bathtub cars, with the only requirement being that the rotary couplers get all oriented the same way. Once CN acquired enough aluminum coal hoppers, they made many of the steel coal fleet available for other lading.

In the early 2000s, up until the stock market crash in 2008, CN filled out the sulphur fleet with these excess steel coal cars. It

22. Remember coal trains require a double-rotary car – and the stripes need to all be oriented the same way throughout the train – or this will happen! Oops ...

was quite common to find CN 196- (black and brown) and 199- (brown) series cars of various heritage in sulphur service. Not many, if any, of these cars received a liner.

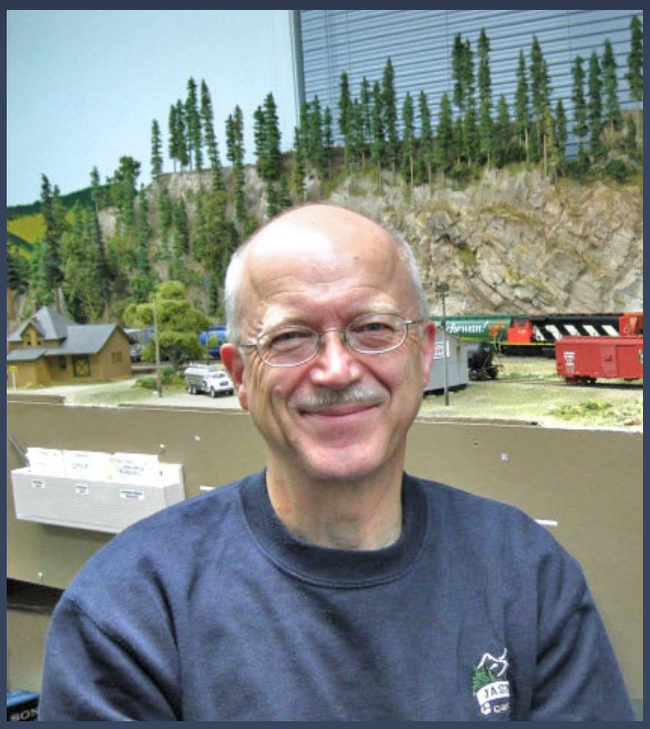
Currently, only former UNPX 102-series bathtub gons, now lettered OFOX with the same car number, are being used along with the SULX cars. Sultran acquired a number of ex-CP bathtub gons and numbered them in the SULX 3000-series.

As the coal business increased, more orders were placed with more than one manufacturer for the 4000 cu. ft. coal gondola. As a result there are now many different versions of the same car. As this began to happen, it became more difficult to maintain pure sets of equipment. The lease arrangements also changed and cars had their reporting marks and numbers changed to reflect that.

Other than Sultran equipment, the cars that ran as complete sets for the longest period of time ended up being the CNHX cars built for Ontario Hydro service. The balance of the cars got lumped together in a pool, making it possible to find any style and number series in any set of equipment.

This last fact allows the modeler to purchase a wide variety of the models to easily build a train longer than 12 cars for either coal or sulphur service, or run shorter cuts of cars to move other commodities such as coke, ties, or sulphur from smaller plants.

Make sure you check out these cars. They are some fine models, and their usage history can make for some fascinating model railroad operations. ☑



Norm's experience with prototype railcars began in 1972 while working on a gang at Falls Creek, BC on the Ashcroft Sub, in 1974 on a Gang on the Camrose and Alliance Subs, and then in 1975 on a gang again, working on the Grande Cache, Edson, Foothills and Mountain Park Subs.

In 1979, he hired on with Canadian National as an operator at various stations in Alberta, one of which was Edson, AB. Edson was the away-from-home terminal for Jasper and Edmonton crews, as well as the home terminal for crews working the Alberta Coal Branch.

In 1981, Norm became a Train Dispatcher and worked all of the territory assigned to the Edmonton dispatching office. As he gained more experience, he was able to work as a Relief Assistant Chief Train Dispatcher, before moving to Montreal Headquarters to work as a Motive Power Controller and in Technological Development from 1986 until 1988. He then returned to Edmonton as an Assistant Chief Train Dispatcher/ Manager, Corridor Operations/Manager, crew Utilization and worked as a relief Regional Operations Control Officer.

Much of Norm's job as an Operator, Train Dispatcher and Assistant Chief Train Dispatcher involved coordinating the movement of the coal and sulphur sets between the mines and unloading destinations, making him a something of an expert on this topic.

North American Railcar Corporation

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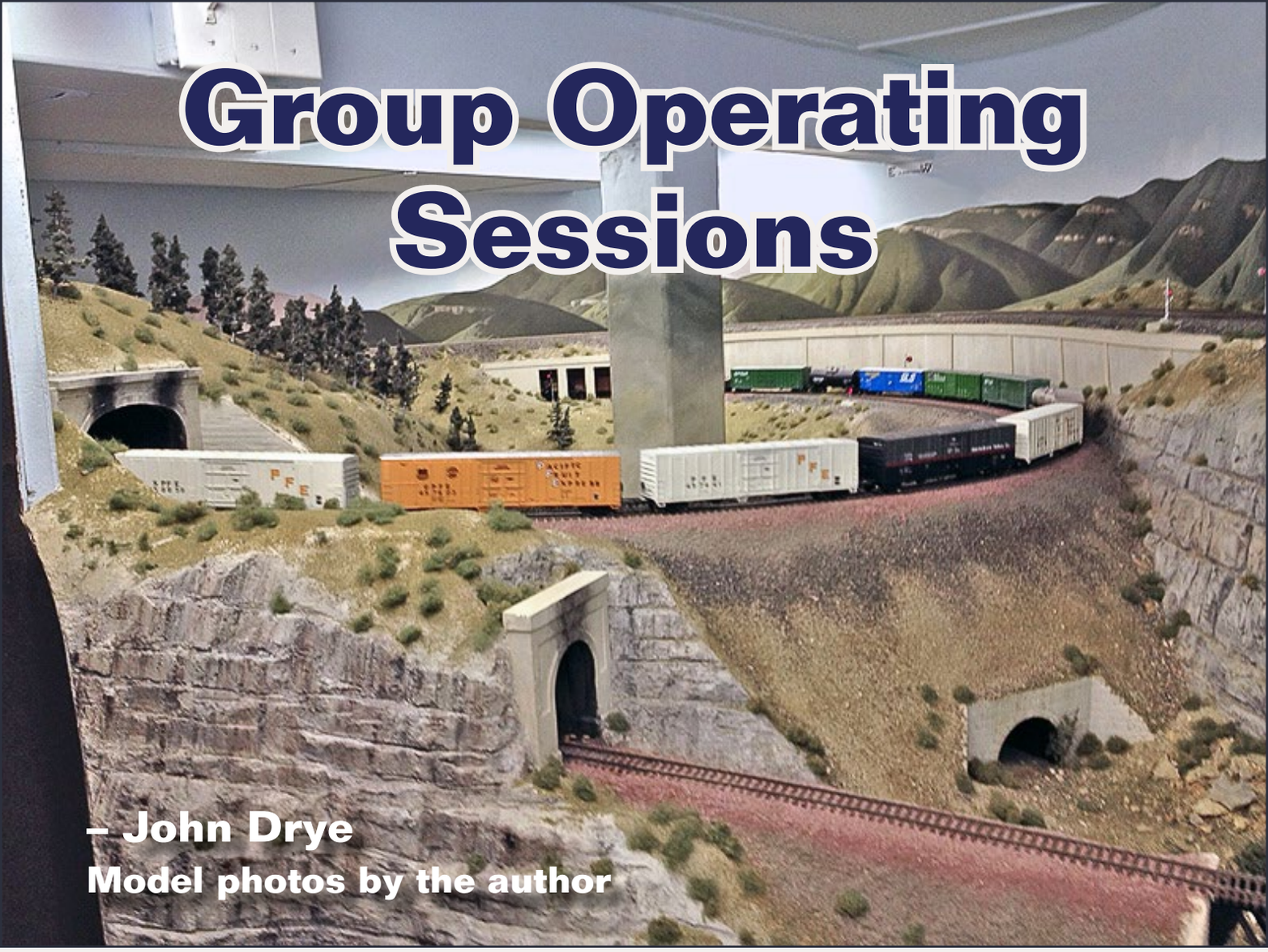


– John Drye
Model photos by the author

Lessons learned from the Great Basin Getaway ops event ...

Reader Feedback (click here)

Group Railroad Operating Sessions are becoming an ever more popular way of sharing our great hobby. They are popping up all over the country, arranged by groups of like-minded

1. There's nothing like running trains on different layouts to give you a fresh perspective on your own modeling. Here at the Great Basin Getaway in Utah, a train running on Gary Peterson's "open helix" stays in view as it moves from level to level.

model railroaders, and often by the NMRA's Operations Special Interest Group (OpSig).

While I'm an N scale modeler, many layouts I've operated on have not been N scale. That actually doesn't matter, because operations have no scale. There is much to be learned and shared by attending one of these sessions, no matter what scale you model in. Attendees can learn by doing, and probably make a few new friends. Most importantly you can learn tricks to hosting an operation session yourself.

I've been fortunate enough to have attended a few of these myself, including the Great Basin Getaway (held in even-numbered years) in and around Salt Lake City, Utah. The sessions included about 50 attendees who operated on four different layouts in the area, and also spent some time socializing and talking up our hobby.

The GBG allowed participants to operate on three of the four layouts. In addition, there was an evening where folks could visit any of the layouts and several others in the area. Each session lasted most of the day, with a break for lunch. There was plenty of time to appreciate the effort each of the hosts put into their railroads.

Here are some interesting things learned from the three layouts I visited.

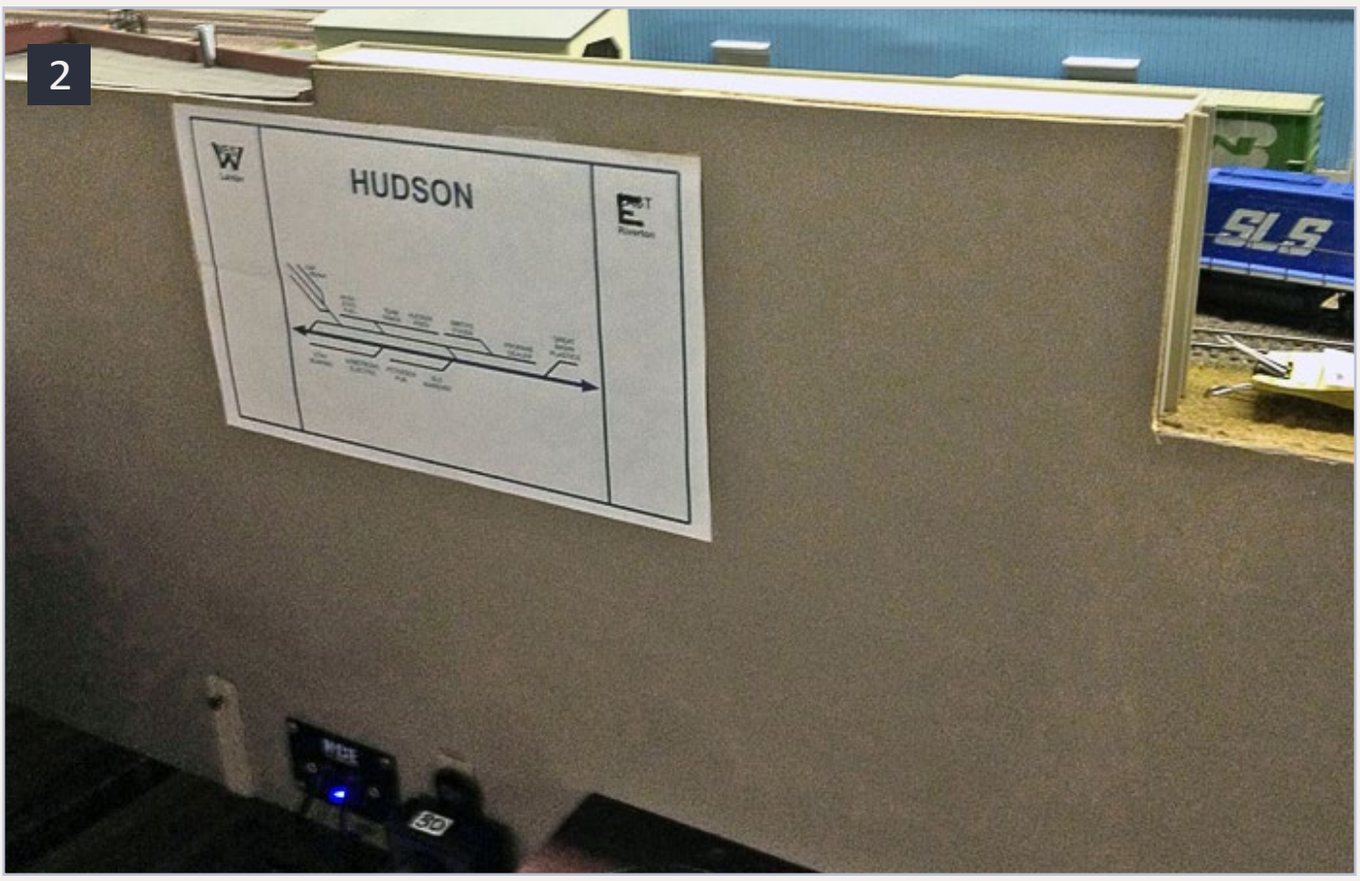
Salt Lake Southern

Gary Petersen's Salt Lake Southern/Chicago & Northwestern layout is a 26′ x 40′ HO scale layout of the SLS/CNW over South Pass, Wyoming to the Salt Lake Valley. The single-track railroad operates using CTC and DCC locomotives.

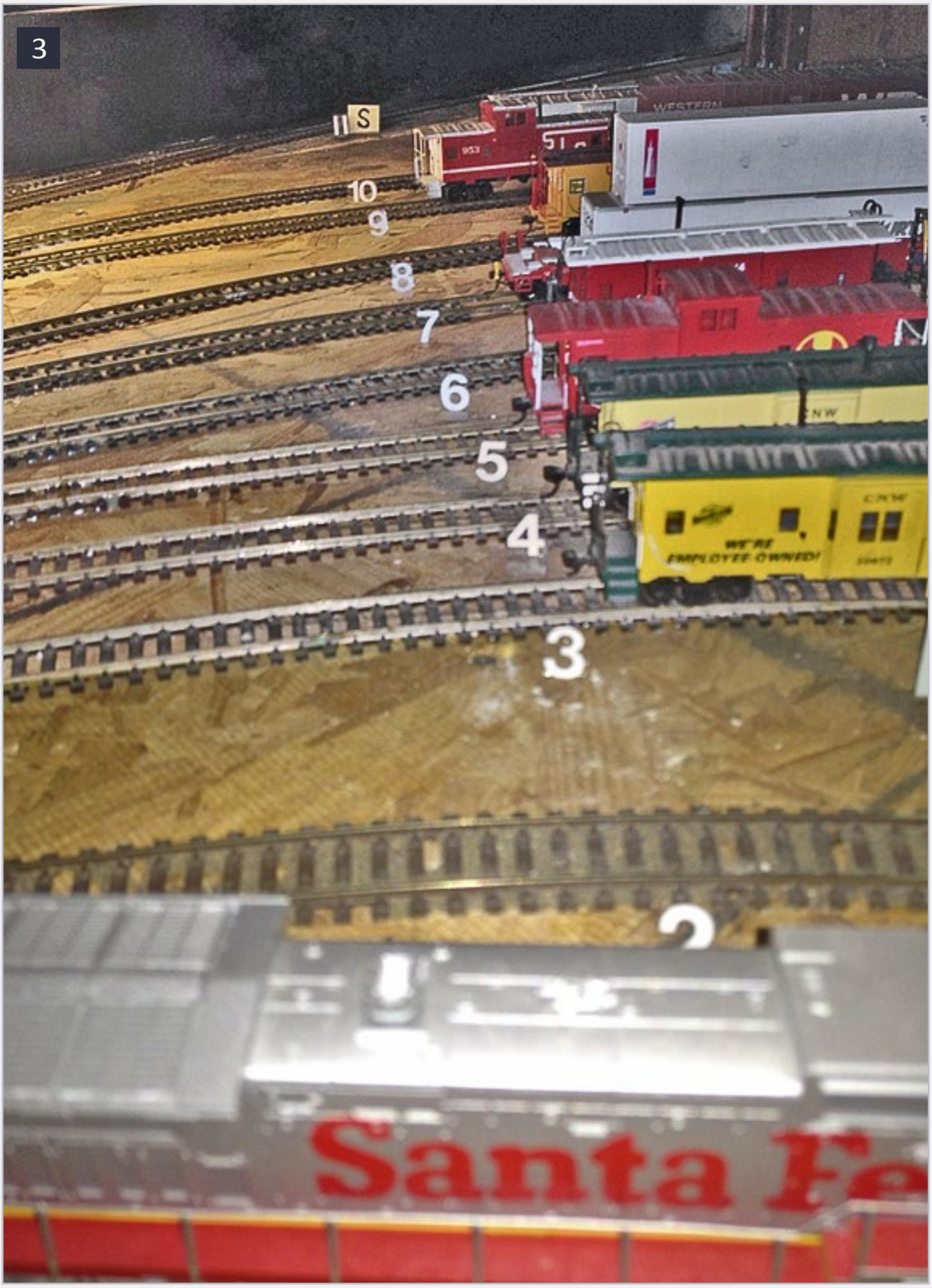
The long multideck mainline provides for widely-spaced non-interfering local jobs, as well as a fleet of through trains. Gary

has included an open scenicked helix as part of the inter-deck transition. The wide-radius spiral looks like a cross between Tehachapi Loop and Keddie Wye. The main line looks believable, and trains are visible all the way up or down. There is a post in the middle of the helix that has been painted with blended scenery colors to match the layout. This impressionistic approach makes the post disappear to the eye and allows focus on trains passing through the scene. Really neat.

Industrial areas include clear track diagrams and industry locations on the fascia. This made switching on an unfamiliar layout a snap and a bunch of fun. In a couple of cases, an industry faces the aisle and the track diagram is on the backside of the building.



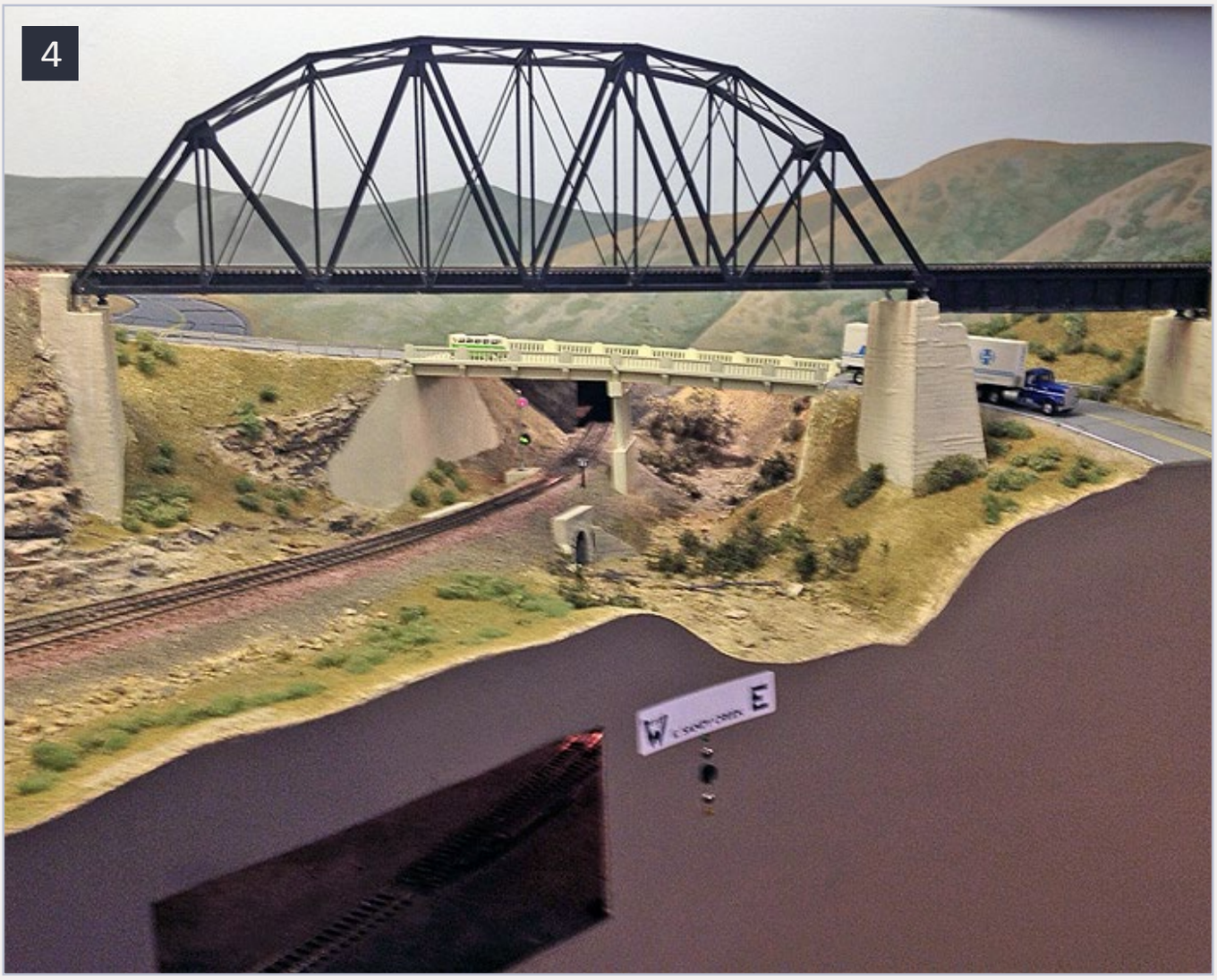
2. Layout diagrams on the fascia or the back of structures make it easy for new operators to locate industry spots.



3. Labels cut from plastic packaging provide durable identifiers for staging tracks.

A particularly clever idea is staging track labels. Gary cut plastic from the packaging batteries come in. Cutting curved portions from the corner allows a track number label to be affixed to the plastic, creating a visible and durable identification of specific staging tracks (3).

In another location, the tracks pass through the backdrop. There is a highway bridge right up against the backdrop above the tracks, perfectly masking the hole in the backdrop. Further camouflaging the trick is a rail bridge on the nearer track passing over the same stream. Combined with the scenery and paint on the backdrop, it makes an effective scene.



4. Careful use of bridges disguises the portal where trains pass through the backdrop.

Utah Colorado Western

Lee Nicholas' Utah Colorado Western Railroad Company connects Denver, Colorado, to Salt Lake City and Ogden, Utah. The 30 x 33 layout provides a bridge route between the cities and also includes additional trackage within Colorado and Wyoming. The railroad operates using a centralized dispatcher and a spectacular CTC control board.

The railroad offers a variety of crew assignments, from through freights (some of which drop and pick up cars on the way), unit coal trains, yard jobs, and dispatching using the control board.

While we were waiting for crew assignments, Lee showed us a small battery-powered soldering iron and noted that it is great for fast repairs during a session. The small iron is perfect for re-soldering a frog or track feeder. Gets hot quickly and cools off fast enough to keep in your pocket.

While running a unit train up to the flood loader, I noticed some small blue plastic rectangles scattered along the tracks at several industries. Upon closer inspection, I found they were labeled "brake" and had a rail-sized groove cut into the bottom. One came in useful when I spotted my caboose on a slight grade in order to run around the train. They are unobtrusive, especially because of the blue color, and work anywhere (5).

At the end of the day, I had a chance to act as "assistant (west) dispatcher" under the close supervision of one of the regular crew. This was a great way to get a feel for this challenging and interesting job. This is something I'll have to do once my PRR becomes fully operational.

Santa Fe

Ted York's Santa Fe represents the Santa Fe and Union Pacific Railroads in Cajon Pass between Los Angeles and Barstow in

1947 -1957. The 29 x 56 foot layout includes familiar territory, as I spent a few years regularly railfanning the area (but, sadly, not in the 1950s).

I was especially looking forward to operating on Ted's layout. The ATSF in Southern California is quite similar in concept to my own PRR layout. Both feature a busy multitrack main line, helper service, and a number of local jobs along the line. They both are set in the early 1950s and helpers are a significant part of the operational scheme.

Both the Pennsy and Santa Fe place helpers ahead of the road locomotives on passenger trains. Both have attractive schemes on the locomotives (even a hard-core PRR fan has to acknowledge that the warbonnet scheme is spectacular!) and a fleet of first class trains. Nothing like handling the helper on the Fast Mail to get a great feel for how it is done.

5. Small plastic 'brakes' provide an easy, unobtrusive way to spot cars on a grade.

6. Details of bridge construction are independent of scale. These ATSF bridges provided a useful guide for PRR civil engineers.

The PRR usually placed freight helpers (‘snappers’ on the PRR) behind the caboose (‘cabin car’). On the Santa Fe, the helpers were cut in ahead of the caboose. I have to admit this is a fascinating part of operations. Ted’s crew was especially helpful in describing how they have learned to apply power gently on both ends of the train and then maintain constant power all the way up the hill. Coordination between both engine crews brings the train to a gentle stop at the summit. Just like the prototype, the trick is to not be in a hurry.

My fellow operators wondered why I took pictures of so many bridges on the layouts. Turns out I am right in the middle of kit-bashing a skewed girder bridge on the PRR, and there is nothing like recording how others have done it. This is a perfect

example of where scale hardly matters. The recessed concrete abutments and bridge shoes beneath the girders work pretty much the same on the prototype and in any modeling scale. I now have a collection of close-up photos showing exactly how it is done.

Summary

The three layouts I visited featured different operations concepts, so the contrast in approaches was quite informative. The PRR used their own unique position-light signals and communicated by trainphone (like early radio), so all the operating systems were relevant to PRR mainline operations. I also learned a lot about how to run local jobs over the main line.

Most of all, it was a blast to share model railroading with some great guys and learn what it takes to host an enjoyable session, and especially how to roll with the punches that our hobby can throw from time to time.

Probably the best place to find information about a session in your area is the OpSig magazine “The Dispatcher’s Office”. NMRA regional meets, and of course the NMRA national convention, are also good places to look.

There is a lot that can be learned in any scale and it is fun as well.

The model railroads included in the Great Basin Getaway are great sources for information on “how to run a railroad.” They look great, run well, and are hosted by affable, knowledgeable model railroaders. There is likely to be a similar set of folks not far from your base of operations: the OpSIG at opsig.org can help you locate such groups close to you. ☑

John Drye is our N-scale editor and columnist. He has been model railroading since receiving the traditional Lionel set at age 8. John is currently building two layouts: an N scale switching module based on the modern Norfolk Southern, and a basement layout based on the transition-era Pennsylvania Railroad.

When not doing trains, John works as a contractor for the US Navy and volunteers for the American Red Cross and Operation Lifesaver.

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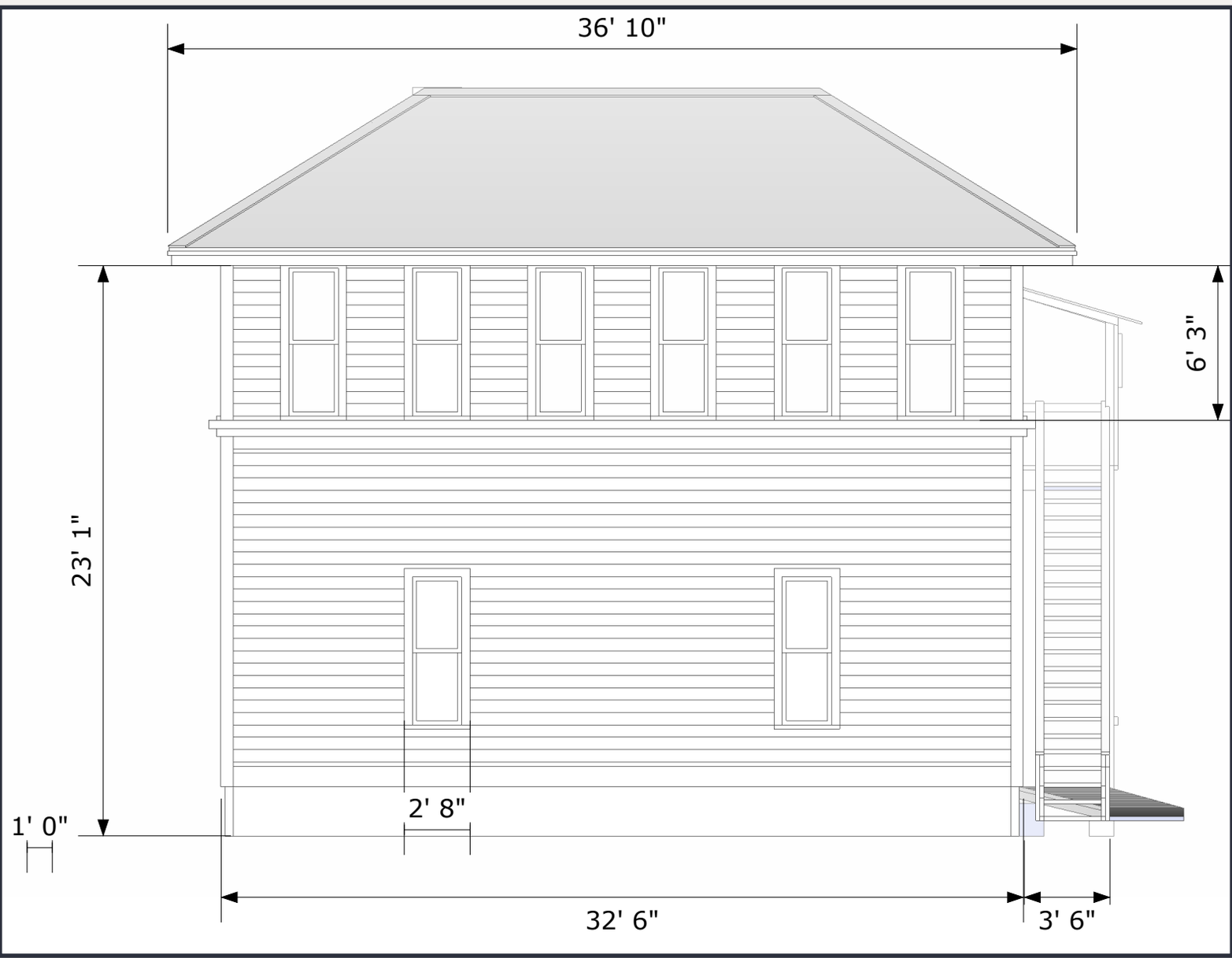
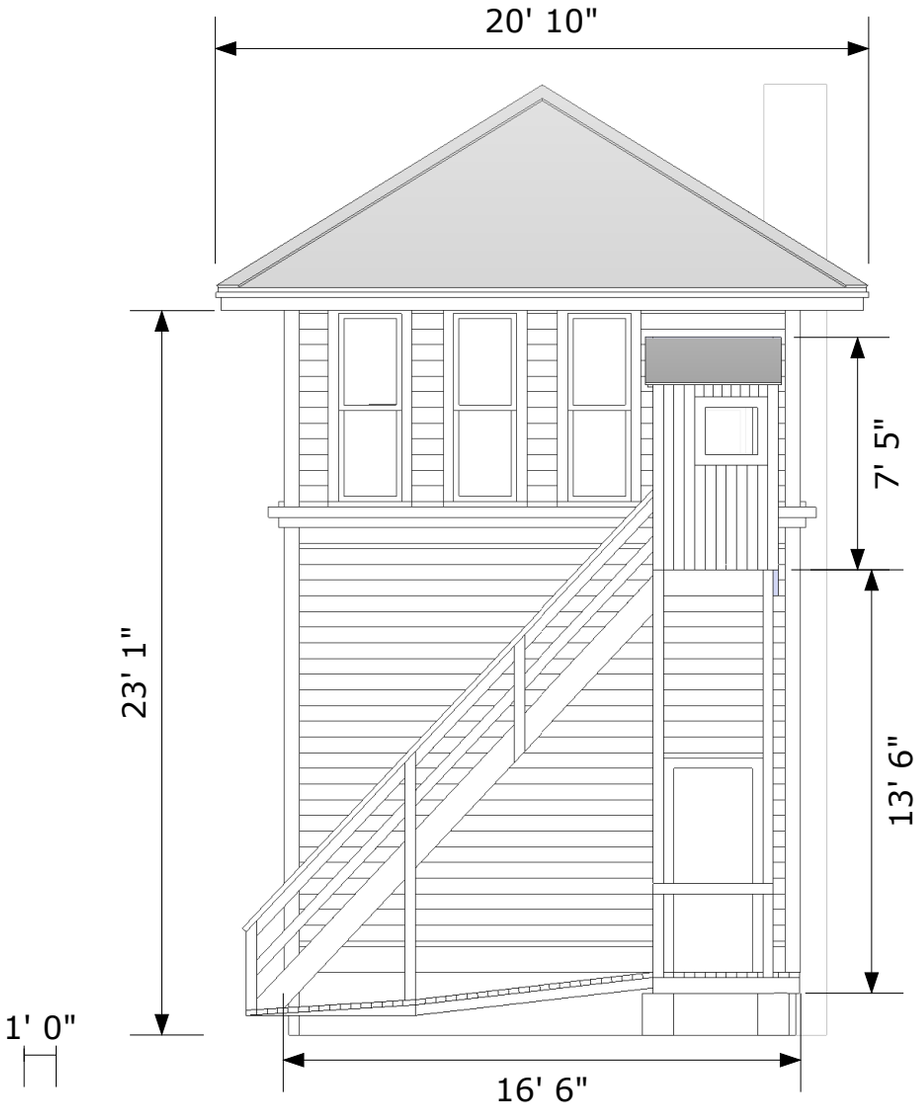
The Kansas City Terminal Railroad had Tower 4, which was the Frisco interlocking plant where the Frisco (St. Louis–San Francisco Railway) crossed the KC Terminal Railroad tracks on the west side of Kansas City Union Station. This allowed the Frisco to operate between the inbound yard at 19th Street, and the outbound yard at Rosedale.

Front elevation





Right side elevation

Drawn by Ben Kaur

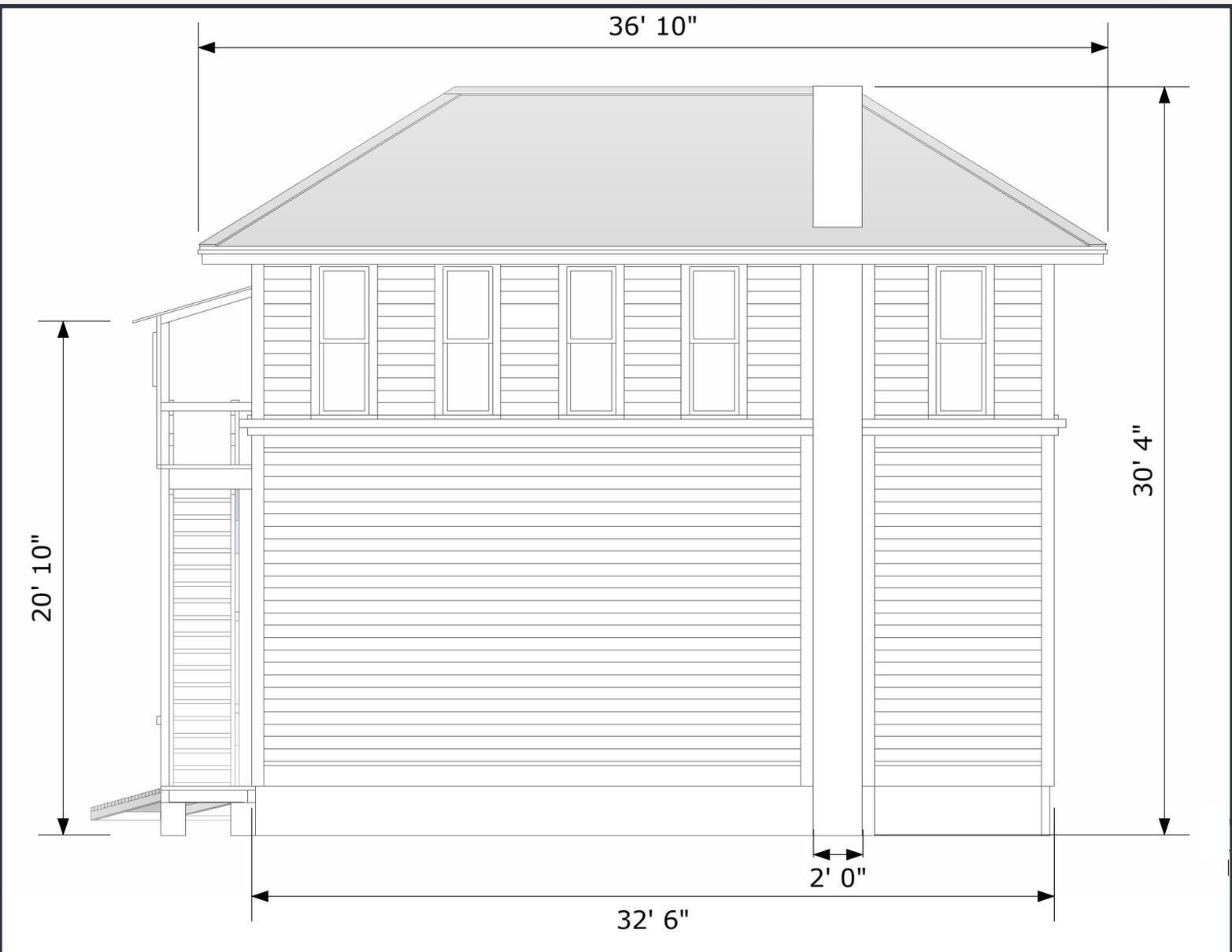
An article on building this tower appeared in the June 2012 MRH. Using that article as a guide, Ben Kaur developed these scale drawings using the 3D drawing program, SketchUp.

Sketchup is a free program for Windows and Macs that you can download from: **sketchup.com**.

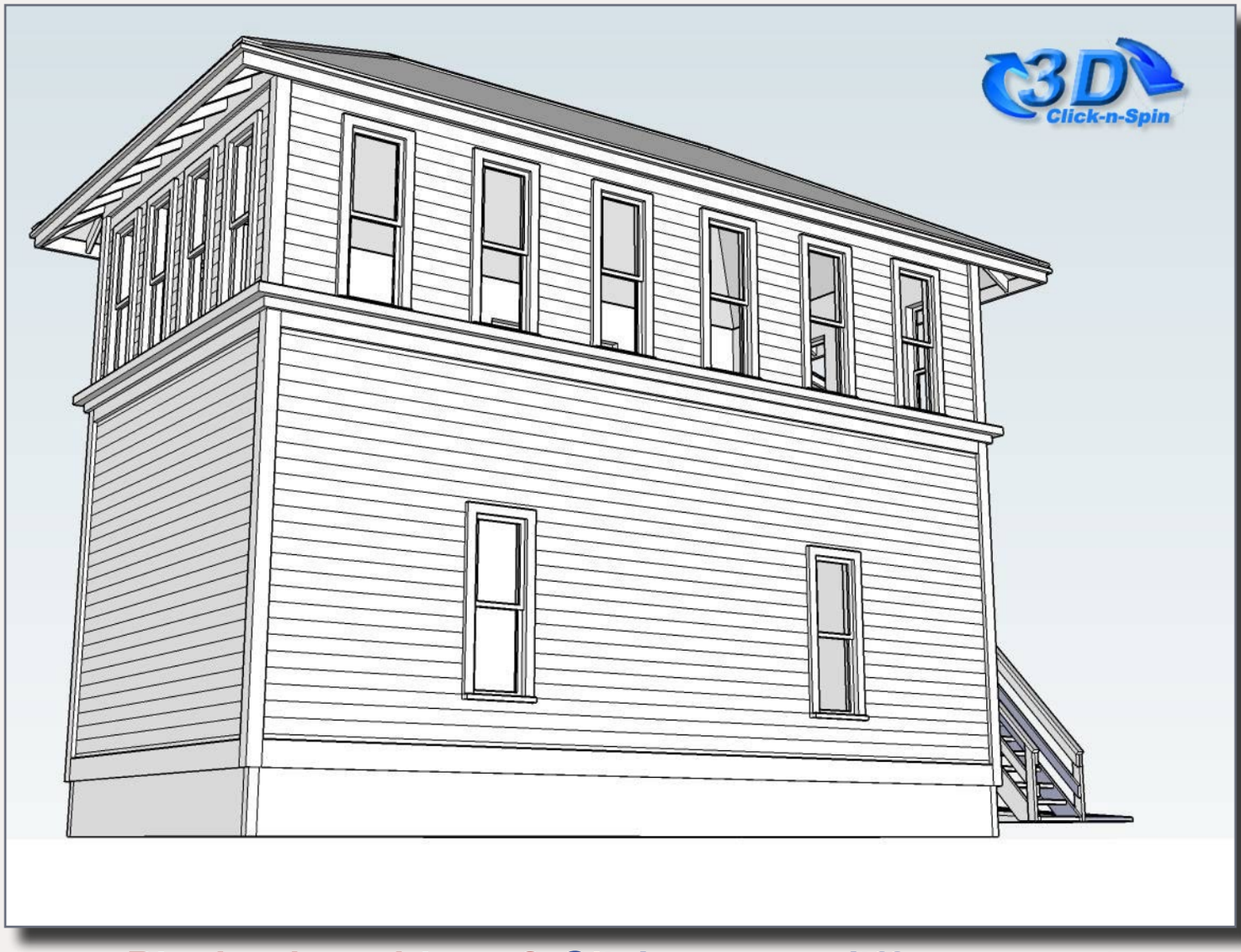
Not only do we provide plan drawings of this structure, we also include a 3D click-n-spin taken from the SketchUp file. If you want fully zoomable plans and a 3D SketchUp file you can zoom and spin in any direction, they're available in the subscriber bonus section for this issue.☑

Reader Feedback
(click here)

Rear elevation



Clickable 3D rendering



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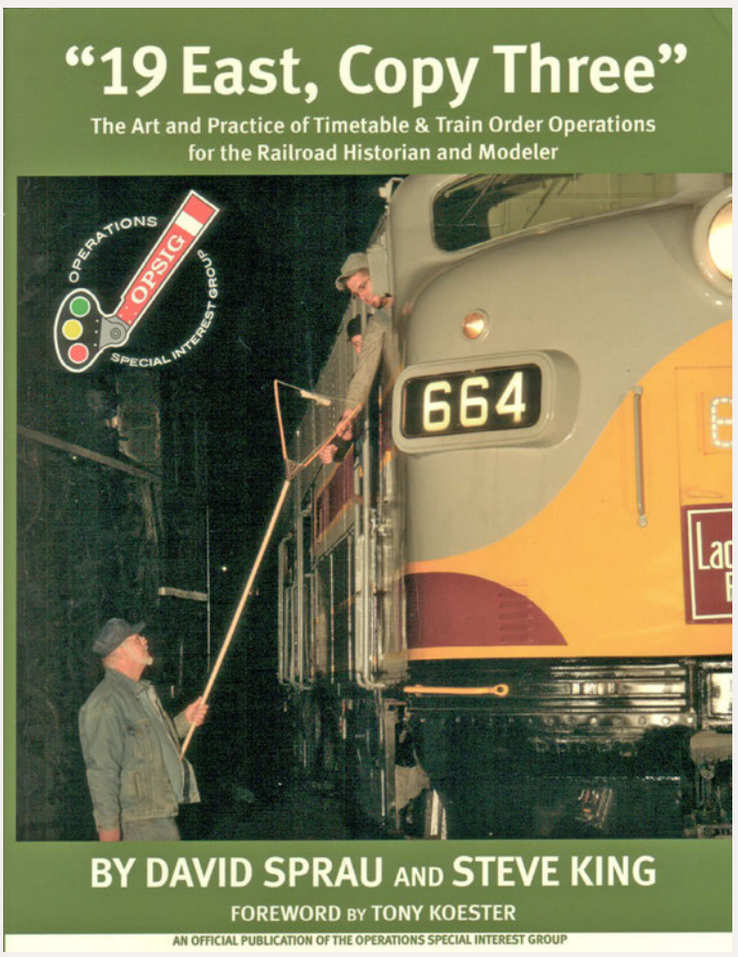
First Look

"19 East, Copy Three"

Timetable & Train Order Operations

by Joe Brugger

Reader Feedback
(click here)



Interested in running with train orders? Do the columns and articles make your head spin, and leave you with unanswered questions? Feel like you're not getting the whole story? Tired of being befuddled by self-appointed experts?

The Operations Special Interest Group is here to help. The group's first book, *"19 East, Copy Three,"* will answer your questions and show you how to set up an authentic and manageable train order and timetable system.

The book grew from nine articles explaining TT&TO that David Sprau wrote for the OPSIG's quarterly "Dispatcher's Office," forming a step-by-step guide on the theory, design and implementation of train order operations. In a separate series, Steve King covered the system from a modeler's perspective and

showed how to set up a timetable and apply TT&TO to a model railroad. This book combines both sets of articles into one volume and improves some of the writing and illustrations. It is loaded with useful graphics, examples, forms, and good color photos.

Timetable and train order operation came into being on North American railroads in the late 1800s and was commonplace until the mid-1970s. Only in the past few months has the Long Island Railroad phased out the use of traditional TT&TO. The system relied on a printed schedule, a dispatcher, a network of train order stations and operators, telegraph to pass along orders, a system of rules, and railroaders well-schooled in operations.

“19 East” will not tell the model railroad hobbyist precisely how operations were handled over Marias Pass on the Great Northern in the 1920s, or the SP's Santa Cruz branch in the 1960s, or any of the very specific situations modelers like to replicate, but it will give a very good grounding in the system that most U.S. railroads used for a very long time.

Previously, people interested in TT&TO were advised to read Peter Josserand's “Rights of Trains,” a professional manual intended for working railroaders. The information was there, but it was tough for an amateur to plow through put the dispatching system into practice. “19 East” uses numerous examples, from simple to complex, to show how train orders work in the real world. Chapter 10 is a useful “Dispatcher Shortcuts, Timetables and Miscellaneous Items,” the kind of things you might learn if you were lucky enough to know an experienced dispatcher – not the sort of information printed in a manual.

Here is an excerpt from "19 East, Copy Three"

“19 East” makes frequent use of examples and a question-and-answer format in explaining TT&TO operation. In Part II, Steve King's series on adapting timetable operations to a model, he spreads a series of situations across several chapters, showing how orders are used to get a train across the railroad.

In this case, Extra 463 has gone on duty at 6 am, to run from Delta to Alpha with a setout and pickup at Charlie. Here's just a taste:

Situation 11

All of you who have accounted for all of the superior trains and are now ready to depart, raise your LEFT hand. All of you who plan to sit in the yard and wait, raise your RIGHT hand. Keep them up and read on. Hint: One of you is in trouble!

Since 7:15 pm yesterday, only two scheduled trains were due to arrive – First Class No. 3 and Second Class No. 65. No. 3 registered in, arriving at 10:31 pm No. 65 registered in, arriving at 12:53 am on January 2nd – a bit late. So, according to the register, both of the superior opposing trains due in the past twelve hours have arrived. The next superior train due at Delta is No. 1, scheduled to arrive at 9:30 am. It's only 7:15 am now and we've got until 8:45 am to make the 40-60 minute run to Charlie and clear up for him. No problem. No. 67 is the next superior train and he's scheduled behind No. 1.

Q. So we are ready to go?
A. Those of you with your LEFT hand up are … dead.

Those of you with your RIGHT hand up are … still on the payroll.

Look again at the train register. Look specifically at No. 65's arrival at 12:53 am on January 2nd. Number 65 arrived at 12:53 am with green signals – indicating section(s) following. Until all sections are accounted for, the Extra 463 East doesn't go anywhere.

How long do we wait? We wait until 12 hours after the 11:45 pm scheduled arrival of No. 65 at Delta, i.e. until 11:45 am After twelve hours (11:45 am) No. 65 and any trains operating as a section of No. 65 lose their right to No. 65's schedule.

How many sections are we waiting for? All of them! In reality, our concern is only for the next section since, unless we're in the clear for that one, we probably don't need to worry about any of the others following him!

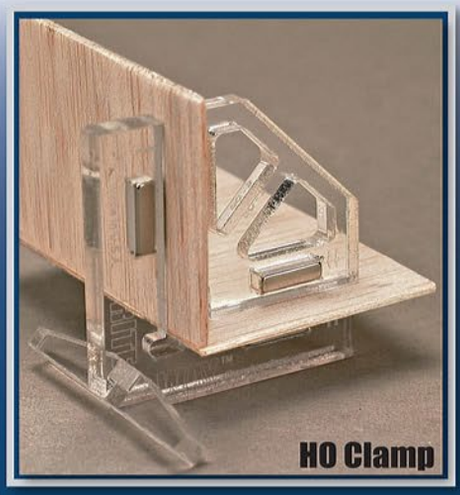
– "19 East, Copy Three" Chapter Four, page 98

Also included are a detailed "Rules and Procedures Quiz Q&A" that's a good way to plug knowledge gaps, and "decision trees" that walk model railroaders through the series of questions and decisions that crews coped with in getting over the line. Pamphlets like these have been available to railroaders, but are not easy to find today.

This is a "no attitudes" manual. The authors aren't trying to impress or scare anyone – they're trying to make it easier for more people to recreate TT&TO operations.

David Sprau is a retired dispatcher for the Northern Pacific, Great Northern and Burlington Northern. Co-author Steve King dispatched on the Baltimore & Ohio and on the Burlington and became known in the 1970s for applying 1:1 dispatching principles to model railroading. The 160-page book is professionally designed by James Eads and Otto Vondrak and edited by Phil Monat. Tony Koester contributed a forward.

The book is available from the Operations SIG of the NMRA at **opsig.org**. The price for OPSIG members is $24.95 plus shipping, and the regular price is $29.95 plus shipping. ☑



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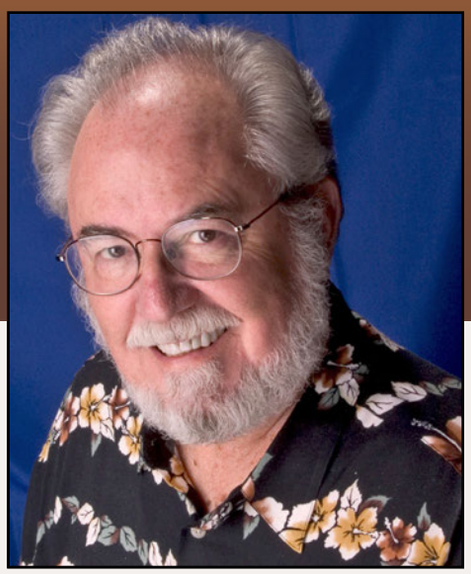


The Old Yardmaster

Reader Feedback (click here)

April 2013:
The latest model railroad products, news & events

by Richard Bale and Jeff Shultz

All Aboard the Athearn Express

Athearn has chartered the ex-Burlington Vista-Dome car, Silver Splendor, for a round trip between Los Angeles Union Station and San Diego on Saturday, August 17, 2013. The cost, including lunch and dinner on board, is $149.00 round trip. Several

Athearn and Horizon Hobby executives will be on board. A layover in San Diego will allow time to visit several interesting sites including the famous La Mesa Club at the San Diego Model Railroad Museum in Balboa Park. Anyone interested should contact Shane Wilson at swilson@horizonhobby.com without delay …

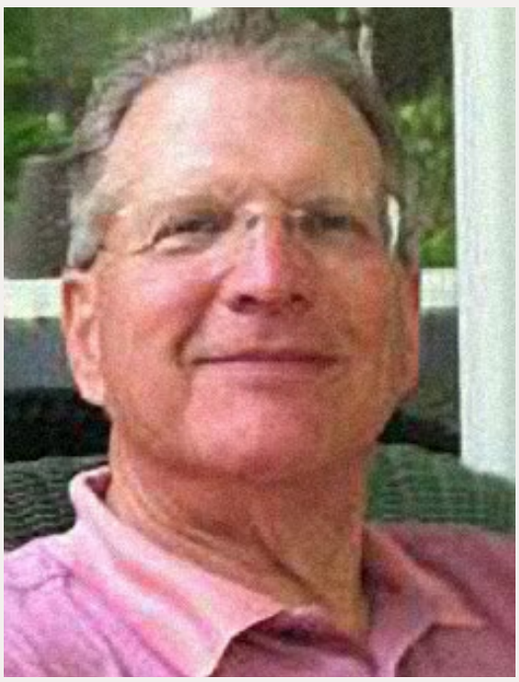
Moving Sale

Sunset Models Inc., has moved from 16 Beta Court to 22 Beta Court, San Ramon, CA 94583. Although that doesn't sound like much of a move, it's enough to prompt a sale and some real savings on in-stock locomotives. Visit the firm's web site at 3rdrail.com for details …

Loco Doc Recovering

Best wishes to Wayne Weiss of Salida, Colorado, as he recovers from surgery and a brief hiatus with family in Texas. Wayne, AKA the Loco Doc (locodoc.com), has a knack for making things run better. Among his specialties are conversion kits, custom mechanisms, and upgraded motors to rejuvenate older locomotives for reliable DCC operation. Get well soon Wayne …

John Roberts 1947-2013

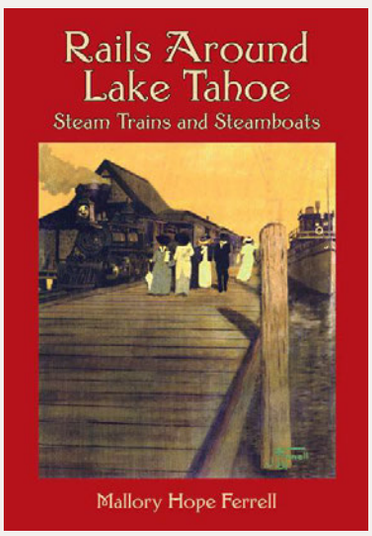


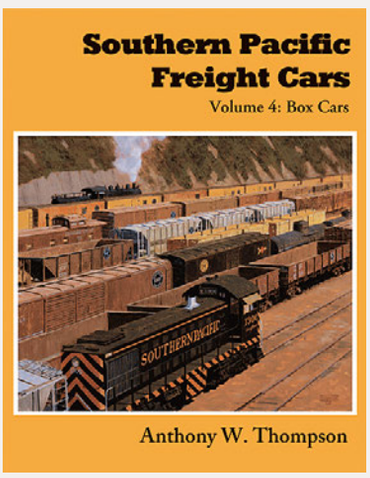
John E. Roberts, Sr., MMR, passed away March 2, 2013, in Williamsburg, Virginia. He was 65. John was widely-known as a model railroad activist and author and was the builder of several highly-regarded layouts. He held a number of elected and volunteer positions with NMRA including president in 2004-2006, vice president in 2000-2004, Eastern district director in 2009-2013, and MCR president and

trustee in 1989-1993. John was a supporter of the RPM movement and was a regular clinician at the annual Prototype Rails event in Cocoa Beach, Florida. John earned a degree in civil engineering from the Southern Illinois University and worked for AON Corporation, a major insurance and risk management firm, for more than 25 years. He is survived by his wife, Suzie Wilkins Roberts, two children, and two granddaughters. The family requests that any memorial gifts honoring John be made to the Diamond Club of the National Model Railroad Association, Inc. (nmra.org), or to the charity of your choice …

NEW PRODUCTS FOR ALL SCALES

Railway Prototype Cyclopedia Volume 26 is now available from **RP CYC Publishing Company** (rpcycpub.com/v26flyer.pdf). In-depth articles in this issue include Pennsylvania Railroad X29 rebuilds, ACF proprietary-end 40' 6" 50-ton boxcars, and the continuing series on early lightweight house cars. The price is $29.95 each. Ordering information is available at the above website.





Among the new titles coming from **Signature Press** (signaturepress.com) are *"Rails Around Lake Tahoe"* by popular author Mallory Hope Ferrell. Steamboats, steam trains, the tourist business, and lumbering operations in the late 1800s are all covered in this scenic view of one of America's magnificent western lakes. Numerous

maps and 294 historical photos are presented on this 256-page hardback book available now at $60.00.

A publication date for a revised edition of "*Southern Pacific Freight Cars, Volume 4",* is expected to be announced soon. The book provides a complete history of SP's boxcars, from the 25-foot, 15-ton cars of 1865 to the 86' auto carriers of 1963. Some special cars, such as the black Overnight boxcars, are also discussed. Author Tony Thompson has corrected some minor errors in the original edition and has added more photographs to extend the forthcoming revision by 16 pages over the first edition. Pricing and a release date are TBA.

The latest hardcover picture books released by **Morning Sun Books** (morningsunbooks.com) include *"Seaboard Coast Line in Color."* Authored by William G McClure III, the new book focuses on the motive power of the Atlantic Coast Line and Seaboard Air Line railroads after the 1967 merger and subsequent formation of the Seaboard Coast Line. Publication #1472 is available now at $59.95. A second publication recently released by Morning Sun is titled *"Railroad Critters in Color Volume 3"* by Stephen M. Timko. The book presents more than 300 photos of small industrial locomotives built by Baldwin, Davenport, General Electric, Plymouth, Porter, Whitcomb, and others. Publication #1473 is available at $59.95.

Micro-Mark (micromark.com) is selling high-intensity LEDs in handy peel-and-stick strips. The flexible light-strips are .375" (3/8") wide, and come in 16' lengths with 300 LEDs spaced on .625" (5/8") centers. The strips can be safely cut at designated locations about every third LED. Suggested uses include special

effects or providing light in confined spaces. The LED strips are available in bright white, neutral white, warm white, blue, and a multi-color mix of red, green, and blue. The strips are priced at $49.98 each. The electrical requirement is 12 volts DC at 1.2 amps per meter (39-1/3"). Refer to Micro-Mark's on-line catalog at the above website for complete technical specifications.

Monster Model Works (monstermodelworks.com) has introduced N, HO, and O scale kits to build brick cornices. The decorative brick work is laser-cut from basswood, which makes it easy to cut, paint, weather, and glue. Kits are available for both new and aged bricks. The above photo shows a completed cornice assembled from aged bricks. A cornice kit for new, clean bricks is shown below.

The N scale cornice kit is priced at $4.99 and has sufficient material to build a cornice 3.25" long. The HO kit is 6" long at $8.99, and the O scale kit is 10.8" long at $15.99.

O SCALE PRODUCT NEWS

Atlas O (atlaso.com) has scheduled the next release of its Trinity 5161 covered hopper for the third quarter of this year. The Masters® series model is based on a center-sill covered hopper initially built by Trinity Industries in 1995. New paint schemes with four road each include Kyle, Union Pacific, and Grupo Vitro as seen here. The release will also include the popular BNSF scheme with eight new road numbers. The O scale ready-to-run model will be available for 3-rail operation at $89.95 each. A 2-rail version will list at $94.95.

Also due in the third quarter is the sixth release of Atlas-O's Trainman® series 40' boxcar. The O scale ready-to-run model will be decorated for Ann Arbor Railroad System as shown here with a modern logo. Also SL-SF Frisco ("Ship it on the Frisco" slogan); Maine Central (blue body with yellow doors and lettering); Richmond, Fredericksburg & Potomac ("Linking

North & South” slogan); and Santa Fe (large herald and “Ship and Travel Santa Fe – all the way” slogan). The model will be available for 3-rail operation at $51.95 and 2-rail at $54.95.

Bachmann (bachmann-trains.com) has released an On30 scale model of a 14-ton Stearns-Heisler steam locomotive. Features of the two-truck geared locomotive include diecast construction, all-gear drive, an enclosed gearbox, metal drive shafts, constant soft-white LED lighting, blackened brass railings, and three stacks. Decorating schemes include Greenbrier & Big Run #5, and Midwest Quarry & Mining #4 (above). It is also available unlettered in black; unlettered in black with white stripes and running board edges; and unlettered black with red windows, white tires, and white running board edges. Bachmann’s Stearns-Heisler model has an MSRP of $419.00 each.

3rd Rail Division of Sunset Models (3rdrail.com) is selling an exceptionally well-detailed O scale model of a Chicago & North Western class H1 4-8-4 Northern steam locomotive. Built in 1929 by Baldwin Locomotive Works, the prototypes were delivered with 76" drivers and were some of the largest 4-8-4s ever built. They were rebuilt in 1940 and again after World War

II when the locomotives received numerous upgrades including new nickel-steel frames, new cylinders, and new fireboxes. They were redesignated as class H-1. The 4-8-4 Northerns were assigned to both passenger and fast freight service, but because of their size and weight, CNW restricted them to the Omaha-to-Chicago main line. The models were handcrafted in Korea. Both 2-rail and 3-rail versions are available at $1499.95 each.

Major projects currently under development at 3rd Rail include an 8-car set of Canadian Pacific's famous transcontinental name train – The Canadian. The cars will be crafted in aluminum and feature correct window arrangements with a proper prototype tint, and warm-white LED overhead lighting. The eight cars include a

baggage/dorm, two 60-seat day coaches, Skyline Dome (coach/dome/coffee shop), diner, sleeping cars Manor and Chateau, and Park Dome (observation/sleeper). Additional coaches and sleepers will be available. The O scale train set will be available decorated for CP, CP Rail, and VIA Rail. As shown in the prototype photo, a matching EMD FP7 A-unit will also be available.

Among the items shown by **Mullett River Model Works** (mullettrivermodelworks.com) at the Chicago O Scale Meet last month, was a new kit that builds into this Northern Pacific double-sheathed wood boxcar. During the first decade of the 1900s, when steam locomotives grew more powerful and began hauling heavier trains with more cars, the increased tonnage caused draft gear on cars with wood underframes to fail. It became apparent that draft gear needed to be attached to steel sills to pull the heavier trains. Steel construction in railroad cars was new and it took time for shops to acquire the proper tools and develop the skills to handle steel fabrication. During this wood-to-steel transition period some railroads continued to favor traditional wood cars with truss rods, but incorporated steel center sills to link the cars' draft gear. Mullett's new Northern Pacific

boxcar is such a car. They proved sturdy and in some cases saw non–interchange service into the 1960s.

Mullett's craftsman kit uses a brass etching for the center sill and a cast brass bolster to simulate the cast steel bolster of the prototype. The body is constructed of basswood and aircraft-grade plywood. The wood for the car body is scribed on both sides so the door can be left open to show interior details. Radial roofs were common on many Northern Pacific cars, and the Enterprise metal roof of the prototype is represented on the model with white metal castings for the ribs between the metal panels of the roof covering. The kit is priced at $135.00. It comes with decals but without trucks or couplers.

HO SCALE PRODUCT NEWS

Accurail (accurail.com) has released seven new freight car kits this month including the Dakota, Minnesota & Eastern triple-bay covered hopper shown above. The model is based on a triple-bay covered hopper built by ACF. The kit is priced at $16.98 and like all Accurail kits includes trucks and Accumate couplers. Also priced at $16.98 is a new kit for a 40' MDT steel refrigerator car with a Gulf Mobile & Ohio herald.

Other new kits include this N&W 50' riveted-side, combination-door steel boxcar at $15.98, a Western Maryland 55-ton USRA open hopper car at $14.98, and a D&RGW 40' double-door steel boxcar at $15.98.

Of special note is a 3-pack of Great Northern wood boxcar kits priced at $44.98. The trio includes two USRA double-sheathed cars (above), and one single-sheathed car with steel Dreadnaught ends.

Accurail has also released a kit for a Louisville & Nashville 50' welded boxcar with a Youngstown door. Priced at $15.98, the car is decorated with both a Cushioned Cargo logo and “The Dixie Line” slogan.

By the end of April, **Athearn** (athearn.com) expects to release its Genesis series GP9 locomotive in four new road names. Decorating schemes for the HO scale ready-to-run models will be Chicago & North Western (above), Conrail, Chicago & Eastern Illinois, and Baltimore & Ohio (next page).

Four different road numbers will be available for each road. Non-sound units will be DCC-ready using Quick Plug™ technology. They will have an MSRP of $189.98 each. Sound-equipped models will list at $289.98 and come with Soundtrax® Tsunami® DCC decoders.

Athearn has released a 52' mill gondola decorated in four new road names including CP Rail (black with PacMan scheme), Canadian National, Burlington Northern (black), and GONX Railgon (above). The HO scale ready-to-run model has an MSRP of $24.98.

Also new from Athearn is a 40' double-door boxcar decorated for Santa Fe with "Ship and Travel Santa Fe – all the way" slogan); Great Northern; Ashley, Drew & Northern; and CP Rail (next column).

Athearn's HO scale ready-to-run double door boxcars have an MSRP of $23.98 each.

In late May, Athearn expects to release a 50' plug-door insulated boxcar with an MSRP of $31.98. The HO scale ready-to-run model is based on a prototype built by North American Car Corporation. Road names will include NIRX-Dresser Magcobar (above), Pearl Brewing, Brown Company, and Western Pacific (below).

Depending upon the prototype practice of the road, the model will have either Pullman-Standard or Stanray roofs, and either Pullman-Standard or Superior doors.

Athearn's 34' two-bay offset-side 50-ton hopper car will be available this summer decorated for Rock Island, Illinois Central, Baltimore & Ohio, and Canadian Pacific (above). The HO scale ready-to-run model has an MSRP of $19.98 each. It will also be available in a 6-pack with different car numbers at $119.98.

In addition to the Herzog scheme shown above, the Evans 52' gondola coming in the third quarter of this year from **Atlas** (atlasrr.com) will be available in five other road names. They include Aberdeen & Rockfish, Amtrak, Chicago & North Western, Grand Trunk Western, and Boston & Maine (with a Minute Man herald). Each road name of the HO scale ready-to-run Trainman® series model will be available in four new numbers at an MSRP of $21.95 each. An undecorated version will also be available for $14.95.

Also due from Atlas in the third quarter is another release of its 50' rib-side boxcar that follows a prototype built by ASF

during the late 1960s and early ‘70s. New road names will include Atlantic & Western, Canadian National, CN-GTW, and Conrail. Reruns of BNSF and Chicago & North Western will be released with new road numbers. The HO scale ready-to-run model will have an MSRP of $29.95. An undecorated version will be priced at $23.95. All road names will be available in two road numbers.

As noted here in our February news report, **Bowser Manufacturing** (bowser-trains.com) plans to release the initial run of its New Orleans trolley cars decorated for St. Charles, Canal Run, and Ferries. Because the Perely Thomas-built car is so similar to other traditional streetcars made by Brill and the St. Louis Car Co., Bowser plans to issue the HO scale model in several “what if” schemes including Atlantic City, Chicago, Philadelphia PRT, and Philadelphia Red Arrow Line.

According to Bowser product consultant, George L. Huckaby, the company is open to suggestions for other decorating schemes suitable for the Perely Thomas streetcar. Serious suggestions should be submitted to George at decals@customtraxx.com.

ExactRail’s (exac-trail.com) Baltimore & Ohio class M-53 wagontop boxcar is now available in five new paint schemes. Developed in B&O’s own shops in 1937, the distinctive cars proved to be durable with many remaining in service into the 1980s.

ExactRail's paint schemes include the so-called wartime scheme introduced in late 1940 with a new capitol herald created by famed industrial designer Otto Kuhler (above), and a mid-1945 scheme with a "Linking 13 Great States" slogan around the capitol herald. Also the postwar scheme with the same herald and "Baltimore & Ohio" lettering high on the left side of the car as introduced in 1946 (below).

Railway Express Agency versions of the M-53 include a car decorated in blue, a color B&O used on a variety of its equipment, and in coach green (below). Both REA cars have gold lettering.

The HO scale ready-to-run model comes with Kadee® #58 couplers, and 50-ton Barber S-2 solid bearing trucks with 33" machined wheels. The HO scale ready-to-run Platinum series model is available direct at $33.95 each.

InterMountain Railway (intermountain-railway.com) has scheduled an October/November release for another production run of its EMD F7 series diesel locomotive. Road names include Baltimore & Ohio; Southern Pacific; ATSF; Bessemer & Lake Erie; Richmond, Fredericksburg & Potomac; Penn

Central; Milwaukee Road; and NJ Transit. A-units decorated for B&O and SP will be equipped with a snow plow. Matching B-units will be offered in all road names with the exception of NJ Transit. A-units will have an MSRP of $149.95 or $229.95 for units equipped with sound. B-units are $10.00 less.

InterMountain reports that since the previous run of F-units significant increases in manufacturing costs have forced them to raise MSRPs on future production releases. Our report on F7 models expected in Oct/Nov reflects the new prices. Prices on InterMountain's metal wheelsets have also been slightly increased. Check with your dealer for additional details.

Also scheduled to arrive from InterMountain in October or November is another release of Class R-40-25 steel refrigerator cars. Road names will include a re-run of PFE cars with the original SP-UP double herald in color as well as in black and white. New decorating schemes will include PFE

(gothic lettering with black and white SP-UP double herald), Northern Pacific (monograph herald and “Vista Dome” slogan), MIDX - Minnesota Iowa Dakotas, MERX - National Packing Company, and IBPX- Iowa Beef Packers as shown here. The HO scale ready-to-run models have metal wheelsets and Kadee® couplers. They will have an MSRP of $34.95 each.

In June, **Kadee Quality Products** (kadee.com) plans to release two HO scale 40' PS-1 steel boxcars including the Louisville & Nashville car shown above. It will have 8' Youngstown doors and Kadee #2100 couplers. The ready-to-run model has an MSRP of $32.95 each.

The second car, also coming in June, is a Buffalo Creek boxcar with an aluminum roof and Superior 5-panel 7' doors. The model has an MSRP of $34.95.

Miller Engineering (microstru.com) has developed a kit for a universal park entrance sign that can be used in a variety of applications. Although the arched sign comes in only one size, the HO and O scale figures pictured above demonstrate how the sign lends itself to various scales. The unit is 4" wide and 3.66" tall. It sells for $58.95.

The sign comes with about 70 individual names for personalizing the arched message. In addition to the Model Railroad Layout sign shown above, several peel and stick signs are included for circuses, amusement parks, and trailer parks, etc. The lights, shown above in yellow, flash in sequence. To see the lights in action visit **microstru.com/Coming-soon.html**.

Sycamore Spring Hotel is the latest HO scale kit from **Nick & Nora Designs** (nicka-ndnoradesigns.com). The kit builds into a shallow background structure for use where space is at a premium. The finished model measures 1.75" deep x 8.75"

high x 7.5" wide. The craftsman-style kit features laser-cut walls, Tichy doors and windows, and BEST shingles. Illustrated instructions are provided along with assembly templates. Kit #ST017 is priced at $45.00 plus shipping and handling. Vehicles and figures in the illustration are not included.

North West Short Line/Oso Railworks (shop.osorail.com) has released repowering kits for rejuvenating older HO scale steam models. Kits are now available for a TYCO/Mantua 0-6-0T and a Varney Dockside 0-4-0T. Principal components in each of the kits include a DCC-friendly motor, a polished-steel worm gear, a machined Delrin axle gear, a Quick-Mount fixture, and detailed instructions. The 0-6-0T kit also has a small flywheel. The repower kits sell for $42.95 each. Details, including installation instructions are available in section 6 of the NWSL catalog which can be viewed at the above web site.

Red Caboose is scheduled to release HO scale ready-to-run versions of its Evans 100-ton coil cars this fall. Road names will include Elgin, Joliet, & Eastern; Norfolk Southern; Detroit, Toledo & Ironton; Grand Trunk Western; Chicago & North Western; and CSX Spring Hill Express as shown here. Each road name will be available in six numbers at an MSRP of $42.95. InterMountain Railway is responsible for marketing Red Caboose products. For additional information visit intermountain-railway.com.

In June, **Roundhouse Division of Athearn** (athearn.com) is scheduled to release 42' Pfaudler express milk reefers decorated for Borden's, Hood's, and Brookside (above). The model represents cars from the 1920s and '30s that transported creamery products in two sanitized glass-lined tanks inside the insulated wood car body. The prototype often traveled at the head end of passenger trains and the HO scale ready-to-run model comes with appropriate hi-speed trucks. The Roundhouse model has an MSRP of $26.98.

Tangent Scale Models (tangentscalemodels.com) has released another production run of its highly-rated PS-2CD 4000 covered hopper cars. Pullman-Standard produced the prototype round-hatch covered hoppers from 1962 to 1964. Until the early 2000s, the cars were in service throughout North America wearing both Class 1 and lease paint schemes.

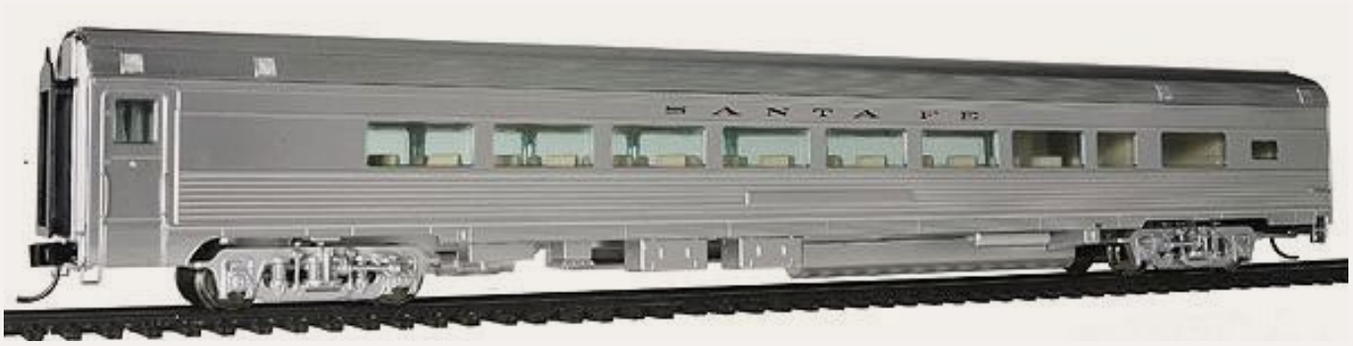
Tangent's current release includes six new paint schemes and reruns of four sold-out schemes. New roads include Burlington Northern (six road numbers in cascade green with a 6-72 paint date), Chicago & North

Western (two number in 1989 zito yellow paint scheme), Chesapeake & Ohio (three road numbers in the original 1962 gray paint with a C&O for Progress logo), CSX (three road numbers in tan paint); Kansas City Southern (two numbers in brown repaint with large KCS initials), and Wisconsin & Southern (two numbers in original gray paint with the distinctive Canada Goose logo).

Re-issues of earlier paint schemes include three new road numbers each for a Chicago, Burlington, & Quincy (original gray paint with red lettering, and Burlington Route herald in black and red), Chicago & North Western (distinctive Clinton Green paint), and Milwaukee Road (original gray).

Selected features include painted, scale-sized wire grab irons and uncoupling levers; etched-metal running boards and brake platforms; air hoses; and thin-profile brake piping. The model comes with Kadee® couplers and 100-ton type N-11 trucks with 36" metal wheels. The HO scale PS-2CD 4000 covered hoppers have an MSRP of $42.95 each. Tangent encourages mixing for multiple car discounts on quantity purchases in increments of 6, 12, 36 and 48. Visit the above website for details.

Walthers (walthers.com) has released four Budd stainless steel passenger cars including an 85' dome car (above), an 85' 1-drawing room/29-seat lounge car (Santa Fe below), a 63' RPO car (NYC car below), and a 73' baggage car (Amtrak Phase I car below).



The four cars are available decorated for Santa Fe, CB&Q, New York Central, and Rock Island (all with black letters on a silver letterboard), PRR (gold letters on a Tuscan letterboard), Canadian Pacific (gold letters on a maroon letterboard), Southern Pacific (silver letters on a red letter-board), and Amtrak Phase IV paint scheme. Amtrak Phase III is available on all cars except the RPO. Amtrak Phase I and II schemes are available on the baggage car only (next page).

73' baggage car in Amtrak Phase I paint, above, and Phase II, below.

85' 1-drawing room/29-seat lounge car in Amtrak Phase III scheme (above), and RPO car in Amtrak Phase IV paint scheme (below).

Walthers Proto™ series ready-to-run passenger cars include factory-installed grab irons, simulated stainless steel exterior, tinted windows, and sprung operating diaphragms. The cars have an MSRP of $74.98 each. The dome and lounge car are also available with factory-installed interior lights at $84.98 each.

A 40' Ortner 100-ton aggregate hopper car is available from Walthers decorated for C&O, Golden West/GVSR, NS, and CR-Conrail as seen above. The HO scale ready-to-run Proto™ series cars have an MSRP of $31.98, and come with a removable aggregate load.

Also available from Walthers is a 40' Trinity 14,000 gallon tank car fitted for transporting molten sulfur. Special features on the newly-tooled car include factory-installed grab

irons, see-through etched metal walkways and end platforms, full underbody details including steam inlet and outlet piping, brake lines and rods, Proto MAX™ metal knuckle couplers, and machined 36" wheelsets. Road names are CGTX-General America (above), GATX-General America (black), ITDX-Sulcom (black), TILX-trinity Industries Leasing (yellow), TILX-Trinity Industries Leasing (black), and TGOX-First Union Rail (black). The Proto™ series model has an MSRP of $37.98.

Walthers 25' C&O wood caboose is based on the road's 90700 series cars built in the 1920s. Decorating schemes include C&O (red), C&O (red with progress herald), C&O (yellow with progress herald, above), and Baltimore & Ohio (yellow with capitol herald). The red cars are sold-out at the factory, however, stocking dealers may still have some available. The Proto™ series car has an MSRP of $39.98.

N SCALE PRODUCT NEWS

The next version of **Atlas's** (atlasrr.com) N scale ALCo S-2 locomotive will be equipped with a LokSound Select dual-mode

decoder that allows operation on either standard DC or DCC layouts. Tooling for the diesel switcher is currently being modified with the initial production release scheduled for the fourth quarter of 2013.

Sound functions include engine start-up and shutdown, prime mover sounds through all eight notches, bell, air horn, air compressor, and dynamic brakes. The LokSound decoder supports all DCC programming modes, and has six output functions. Atlas cautions that on a DC-powered layout, a DCC- and sound-equipped locomotive, such as the S-2, cannot be consisted with another locomotive that does not also have both DCC and sound. This limitation does not apply to DCC-equipped locomotives operating on a DCC layout.

The ready-to-run model will have either horizontal or vertical radiator shutters, depending on the practice of the prototype road being modeled. Additional features include redesigned truck frames, directional LED headlights, and separately-applied grab irons, air hoses, and uncoupling levers.

Road names on the S-2 will include Boston & Maine (black with red and white stripped nose), Canadian Pacific (maroon and gray with script lettering), Erie Lackawanna (gray with maroon stripe), PRR (Brunswick green with gold lettering), Santa Fe (blue and yellow scheme), Susquehanna, and Great Northern

as shown here. Atlas Silver Series DCC-ready S-2 models will have an MSRP of $119.95. Atlas Gold Series S-2s with ESU® Sound will have an MSRP of $239.95.

Additional N scale items coming from Atlas include a Master® series 50-ton USRA single-sheathed boxcar. New paint schemes include ACL, FW&D (with a Burlington Route herald), Erie (above), M-K-T, Western Maryland, and CMSt.P&P (below, with a Milwaukee Road herald). The ready-to-run models are scheduled for release in the third quarter at an MSRP of $20.95 each. An undecorated model will also be available at $16.95.

During the third quarter of 2013, **Bluford Shops** (bluford-shops.com) plans to deliver N scale versions of wood chip cars based on prototypes with steel extensions welded on

top of offset-side hopper cars. Features of the triple-bay cars include removable loads and knuckle couplers. Cars with rib-side extensions will be available decorated for CP Rail; Illinois Central, Grand Trunk Western (wet noodle scheme); and Ashley, Drew & Northern. Wood chip cars with flat extensions will be available for Seaboard Air Line, SL-SF Frisco, Gulf & Mississippi, and Chattahoochee Industrial Railroad. The ready-to-run cars are priced at $24.79 each. They are also available in 2-packs at $49.58 or 3-packs at $74.37.

Coming from Bluford Shops late this summer is a new group of 14-panel triple-bay hopper cars that replicate a prototype built by Greenville. Road names will be Pittsburg & Shawmut, Denver & Rio Grande Western, and Clinchfield Railroad. The ready-to-run cars are priced at $21.79 each. They are also available in 2-packs at $43.58 or 3-packs at $65.37.

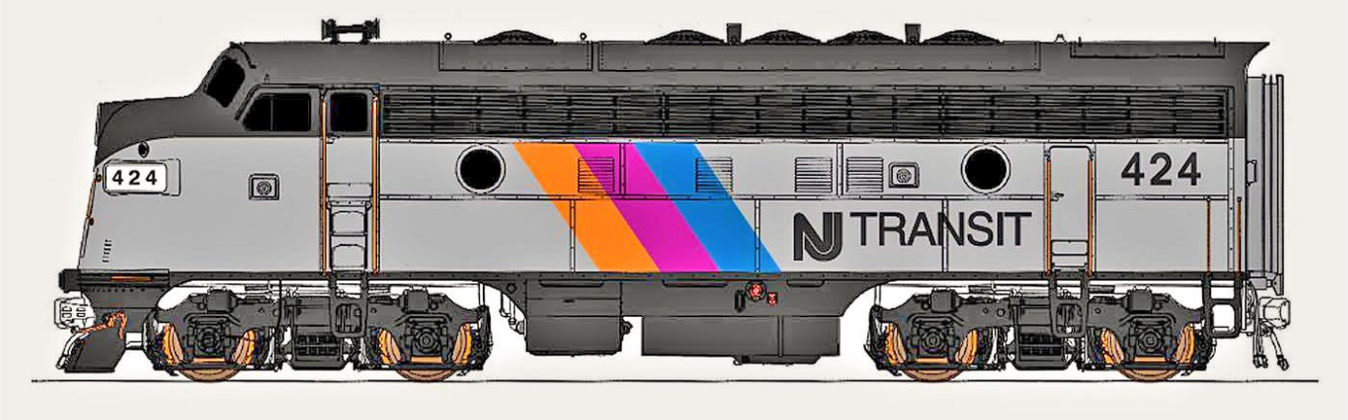
Deluxe Innovations (deluxeinnovations.com) has scheduled a third release of its popular 1944 AAR 40' boxcar decorated for ATSF. The model is equipped with a running board and displays “El Capitan” on one side and a straight-line Santa Fe system map on the opposite side. The ATSF cars have an MSRP of $24.95 each. They are also available in a 2-pack at $49.90 and in a 3-pack at $74.85.

A Baltimore & Ohio class B-19 version of the N scale ready to run model will also be available. It lacks a running board and

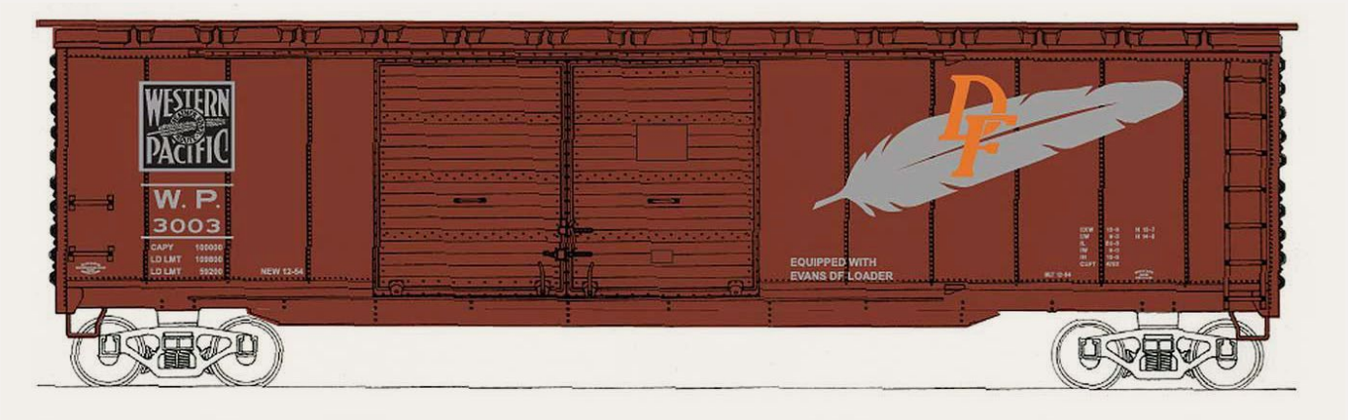
represents a prototype originally built in the late 1940s as a PRR class X-43 boxcar. The B&O model is priced at $22.95 each or in a 3-pack with different numbers at $68.85. Both the B&O and ATSF models come with Micro-Trains® trucks and couplers.

Fox Valley is developing all-new tooling for a Canstock boxcar with the side doors offset for more efficient loading. Special features on the N scale car include different roof panels depending on the era being modeled, knuckle couplers, metal wheelsets, and photo-etched end walkways. Road names scheduled for the initial release include B&O and B&O Chessie System cars with white fiberglass roof panels. Also a car decorated for CSX with an all- steel roof. The ready-to-run model will have an MSRP of $24.95 each. InterMountain Railway is responsible for marketing Fox Valley products. For additional information visit intermountain-railway.com.

InterMountain (intermountain-railway.com) has scheduled an October/November release for another production run of its EMD F7 series diesel locomotive. Road names include Baltimore & Ohio; Southern Pacific; ATSF; Bessemer & Lake Erie; Richmond, Fredericksburg & Potomac; Penn Central; Milwaukee Road; and NJ Transit. A-units decorated for B&O



and SP will be equipped with a snow plow. Matching B-units will be offered in all road names with the exception of NJ Transit. A-units will have an MSRP of $119.95 each. B-units will list at $114.95. InterMountain reports that since the previous run of F-units significant increases in manufacturing costs have forced them to raise MSRPs on future production releases. Our report on F7 models expected in Oct/Nov reflects the new prices.



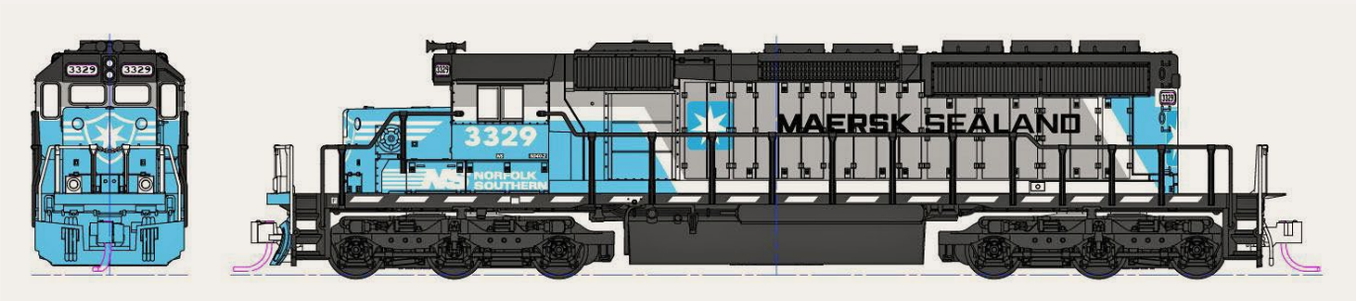
Also coming from InterMountain in Oct/Nov is a new production run of a 50' AAR double-door steel boxcar. Reruns with six new road numbers will include cars decorated for Southern Pacific, Western Pacific (feather herald), KCS *("Southern Belle" slogan),* and Lehigh Valley. New road names include Pere Marquette, Nickel Plate Road, Penn Central, and Milwaukee Road. The N scale ready-to-run models have an MSRP of $22.95 each.

Kato (katousa.com) is currently selling EMD F3 A and B-units decorated in ATSF traditional red and silver warbonnet as well as the Santa Fe's yellow bonnet scheme (above). A-units equipped with a DCC decoder have an MSRP of $130.00 each. B-units are $125.00. B-units without a DCC decoder list at $85.00 each.

Kato has added two new paint schemes to its lineup of SD90/43MAC locomotives. New are San Luis & Rio Grande, and Union Pacific with a "We Can Deliver" slogan. The N scale ready-to-run models have an MSRP of $125.00. They

will accommodate a drop-in after-market DCC decoder such as Digitrax DN163K2 or Train Control Systems K2D4.

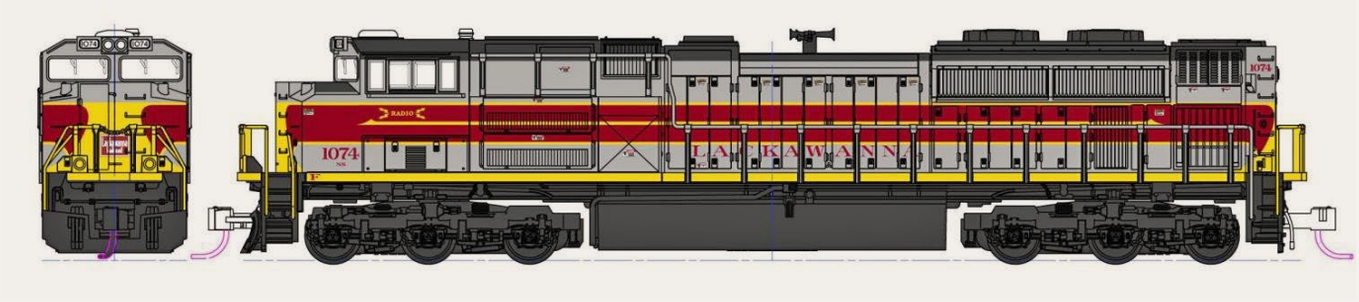
Kato is scheduled to release its N scale EMD SD40-2 in four new paint schemes including Santa Fe (above with comfort cab and rear mounted air horns), and Burlington Northern in standard green in May.



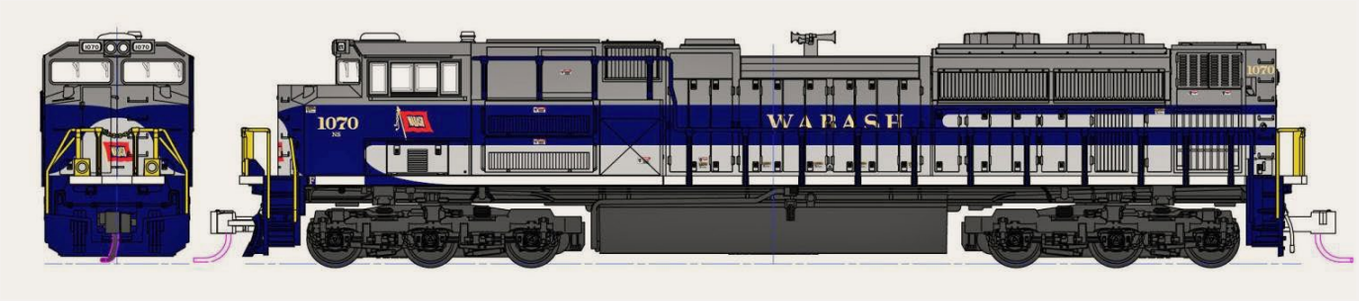
Others due in May include Illinois Central (black) and NS-Maersk Sealand scheme (above). The ready-to-run models will have an MSRP of $118.00 each.

Kato has scheduled a summer release date for its N scale version of Norfolk Southern's Heritage Fleet of SD70ACe locomotives. Kato has modified existing tooling to replicate NS details including a new comfort cab, revised roof details, and front and rear directional lighting. The ready-to-run model will have

an MSRP of $125.00 each. In addition to the New York Central scheme (above), the SD70ACe will be available decorated for Erie, Illinois Terminal, Virginian, and Lackawanna (below).

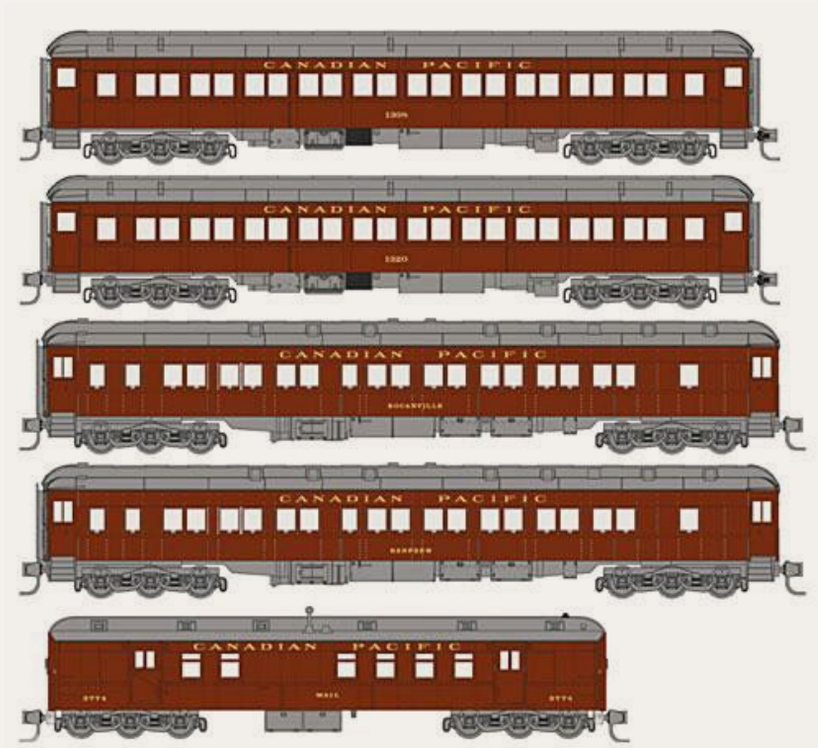


Also Norfolk Southern, Reading Lines, Jersey Central, Penn Central, Savannah & Atlanta, and Wabash (below).



Micro-Trains Line (micro-trains.com) is selling models of ACF triple-bay center-flow covered hoppers decorated for Potash Corporation. The salmon-red cars ride on Barber roller bearing trucks. The N scale ready-to-run cars are available in two road numbers at an MSRP of $27.90 each.

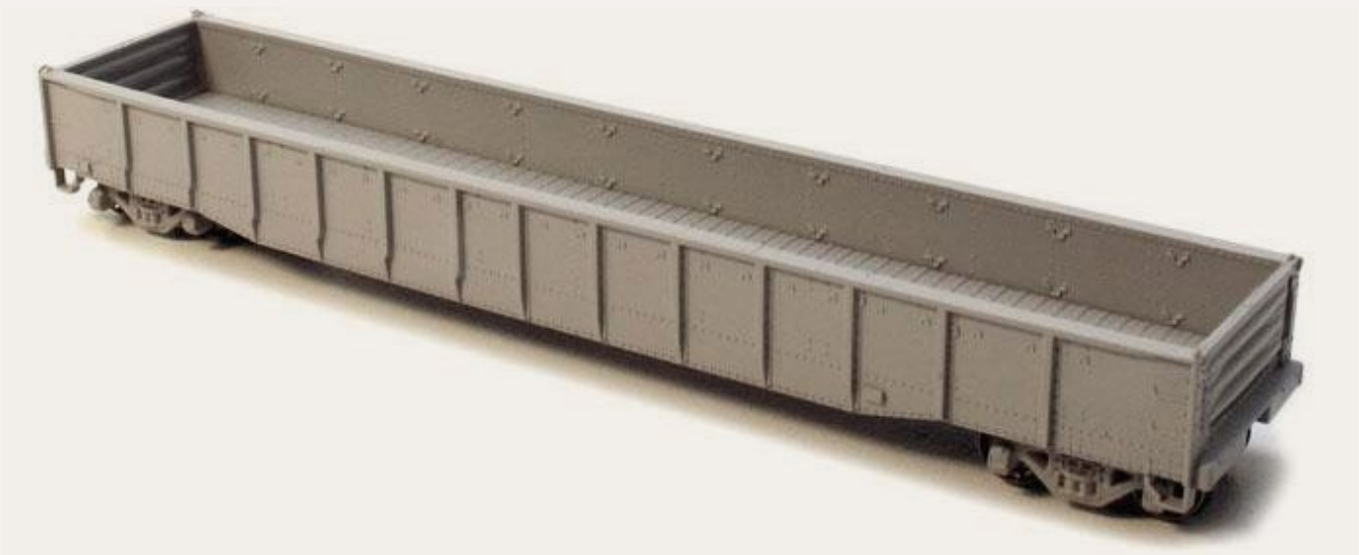
Micro-Trains will launch a new series of specially-decorated reefer cars in May with the introduction of Lemp Brewery Company's Falstaff car. All of the N scale cars in the 12-car series will have an MSRP of $26.95 each.



A five-car set of Canadian Pacific heavyweight passenger cars is scheduled for release from Micro-Trains in June. The set includes an RPO car, two paired-window coaches, and two 10-1-2 sleeping cars. The set of N scale ready-to-run cars has an MSRP of $99.95.

Also due from Micro-Trains in June is a 4-pack of New Haven boxcars with an MSRP of $59.95.

Rapido Trains is developing three new N scale models including a caboose, gondola, and bulkhead flatcar. The models are being produced exclusively for **Prairie Shadows Model Railway Company** of Winnipeg, Manitoba (prairieshadows.com). The photos are of early test shots from the new tooling.



The Canadian National Pointe St. Charles steel caboose features separate grab irons, complete interior details, replication of complex underbody details, working marker and interior lights activated by a magnetic wand, and body-mounted

Micro-Trains® couplers. The initial production run will come in 12 different road numbers at $49.99 each USD. Availability is tentative scheduled for late summer or early fall.

The gondola replicates a 14-panel 52' 6" steel prototype with drop-ends built in Canada in the 1950s. Features include full details on both the outside and interior of the side panels; complete underbody detail with separate piping; die-cast floor (for weight); and body-mounted Micro-Trains® couplers. Paint schemes on the initial release will be Toronto, Hamilton and Buffalo (black body); Canadian National (boxcar red); Canadian National (boxcar red, wet noodle scheme); Canadian Pacific (black); and CP Rail (red body with pacman logo).

The prototype of the new N scale bulkhead flatcar was built at Hawker-Siddeley's Trenton Works in 1974. Features of the ready-to-run model include etched ladders, full underbody detail with separate piping; die-cast frame, and body-mounted Micro-Trains® couplers. Road names on the initial release will be Duluth, Winnipeg & Pacific (black body, green ends); Canadian National (boxcar red); CN-ex NAFX (red body); and BCIT-British Columbia Railways.

Availability of the gondola and bulkhead flat car is expected in the fall. Each road name will be available in six different numbers. Undecorated models will also be available. All versions will be priced at $32.95 USD each.

Red Caboose is scheduled to release N scale ready-to-run versions of its Evans 100-ton coil cars in October or November. Road names will include Elgin, Joliet & Eastern; Norfolk Southern; Grand Trunk Western; Chicago & North Western; CSX Spring Hill Express; and Detroit, Toledo & Ironton as shown here. Each road name will be available in six numbers at an MSRP of $25.95. InterMountain Railway is responsible for marketing Red Caboose products. For additional information visit intermountain-railway.com.

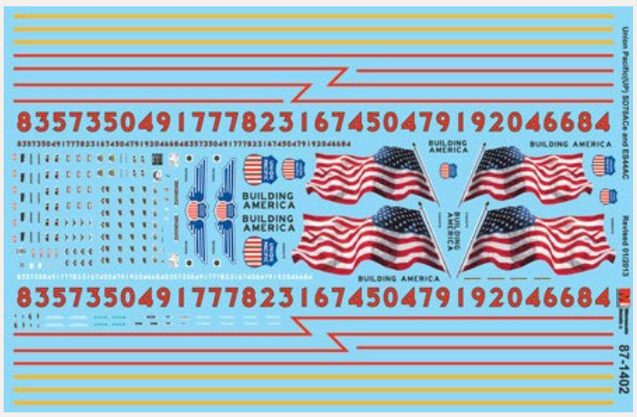
NEW PRODUCTS FOR Z SCALE

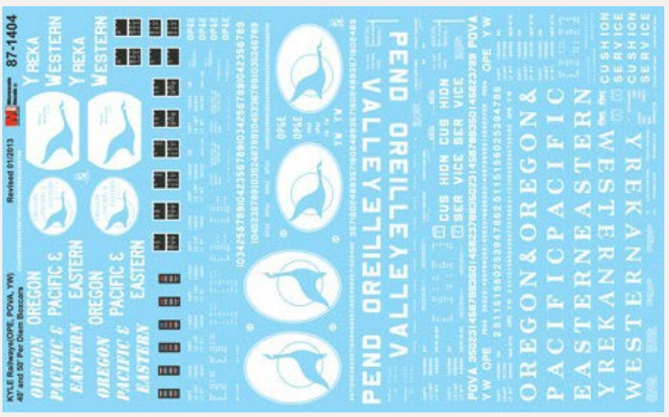
Micro-Trains Line (micro-trains.com) will begin a new series of specially decorated Z scale reefer cars in May with the introduction of Lemp Brewery Company's Falstaff car. All of the Z scale cars in the 12 car series will have an MSRP of $26.95 each.

New Z scale models coming in June from Micro-Trains include a 4-pack of 50' Burlington Northern boxcars. The doors on the actual production run will

differ slightly from the above illustration. The 4-pack will have an MSRP of $79.95.

NEW DECALS, SIGNS AND FINISHING PRODUCTS





Microscale Industries (microscale.com) has released seven new HO and N scale decal sets. They include Rock Island – CRIP decals for cab diesels in black, red and maroon paint scheme #361; Chesapeake & Ohio passenger equipment stripes and numbers plus extra C&O logos #1398; Northern Pacific wood chip gondolas including CVMW flat and stock cars #1399; and Chicago Great Western insulated boxcars #1400 (suitable for the Moloco kit). Also Chicago Great Western passenger car lettering in deluxe gold plus gold and red stripes #1403; and Volume 2 of Southern Pacific DTC block boundary names, SPINS numbers, and ROW signage #1401. New decals illustrated above include Union Pacific SD70ACe and ES44AC Eco locomotives #1402; and Kyle Railway boxcars which includes Oregon, Pacific and Eastern, and Yreka Western #1404. Lettering sets for HO scale have an MSRP of $7.00 each. N scale versions are $5.25.

New decals currently under development at Microscale include GATC 2600, 3500, and 4180 Airslide hopper data; AutoMax data, lettering and portholes; Oregon shortline per-diem boxcars; Kyle Railways freight cars, locomotive, and cabooses; and Western Pacific insulated 50' and 60' boxcars.

San Juan Decals (sanjuandecals.com) has released a 1:20.3 scale (15mm, Fn3) lettering set for Nevada County Narrow Gauge Railroad. Item SJD-208 is priced at $10.95 and has sufficient material to decorate multiple cars.

Send us your product announcements

If you are a hobby manufacturer with a product announcement, just click here and submit your announcement to us. Our web site and free magazine reach continues to grow, so get on board with this new media train that's hard to stop!

Briefly noted at press time...

. . . **Archer Transfers** (archertransfers.com/AR88090.html) has 3D resin decals for weld beads available at $8.95 per sheet. Each sheet has 24 inches of beading .009'' wide.

. . . **Blackstone Models** (blackstonemodels.com) has introduced two pilot kits to modify its HOn3 K-27 locomotive. Switcher and road pilot assemblies are available with diecast frame and deck construction, plus wire and plastic detailing. Kadee® No. 714 couplers are installed on each pilot. The kits have an MSRP of $24.95 each.

. . . **Bowser** (bowser-trains.com) has announced a December delivery date for new products including an Executive Series Baldwin S-12 switch engine, class H21a hopper cars, and both 3 and 5-unit TTAX spine cars. The S-12 will come decorated for Monongahela, PRR, SP, Erie, GN, Lehigh Valley, PRSL, MKT, and C of G. Models with sound will have an MSRP of $279.95. Non-sound models will list at $179.95. The hopper cars will be available for PC, N&W, Virginian, and six different PRR schemes – all at an MSRP of $24.95 each. Watch for more details, including photos of pilot models, in the next issue of MRH.

. . . **Concept Models** (con-sys.com) is selling body kits (no trucks or couplers) for 55' 6''and 64' 6'' cryogenic argon tank cars. Also new is a SMAX/ACMX depressed center flat car. Full details are available at the above website.

. . . **Märklin Inc,** which has been operating under bankruptcy protection since 2009, has been acquired by Sieber & Sohn GmbH & Co. The firm also controls Trix and LGB. The company is headquartered - , Germany, with most of its production facilities located in Hungary. Items currently being produced in China are expected to be returned to Europe.

. . . **Kato USA** katousa.com/Kobo is taking pre-orders through April 5th for its Caltrain Bi-Level cars custom painted and

Briefly noted at press time...

detailed using the Chicago Metra Bi-level car body. The 5-car set includes three coaches and two cab-coaches in a bookcase-style presentation box. Delivery is expected by the end of May. Details are at the above website for details.

. . . **Mask Island Decals** (maskislanddecals.com) has new HO scale decals for Milwaukee Road 40' boxcar with DF2 option, Kansas City Southern 50' DF box car, and Missouri Pacific 60' P-S auto parts boxcar. The decal sets are $6.00 each.

. . . **Mount Vernon Shops** (mountvernonshops.com) has released HO scale PRR shadow keystone decals for covered hoppers. They are designed for class GLe, H21d, H30, H30a, H32, and H33 cars.

. . . **Sidetrack Laser** (sidetracklaser.com) is selling an HO laser-cut kit for Lobo Motorcycle Works. Visit the company's website for details including pricing and ordering information.

. . . **Walthers** (walthers.com) has HO scale 32' trailers decorated for Penn Yan Express, JA Garvey, Lombard Bros, and Connecticut Fast Freight. Also 40' trailers for Branch Motor Express, Spector

Motor Service, Delta Motor Lines, Thurston, EMD, and Western Express. The SceneMaster™ trailers have an MSRP of $19.98 for a 2-pack.

. . . **Westerfield Models** (westerfieldmodels.com) has re-issued HO scale resin kits for 3400 series Pressed Steel Corporation ore cars. Both original and modern versions are available. The cars are sold in sets of two without decals at $38.00 each, or with decals at $40.00. ■

Selected Events

April 2013

AUSTRALIA, MELBOURNE, April 12-14, 13th National Australian N Scale Convention, at Rydges Bell City Event Centre, Preston. Info at convention2013.nscale.org.au or send email to nscale2013@bigpond.com.

CANADA, ALBERTA, CALGARY, April 20-21, SuperTrain, with live demonstrations, clinics, and manufacturers displays. Subway Soccer Centre, 7000-48 Street SE. For fees and hours visit supertrain.ca.

CANADA, BRITISH COLUMBIA, KAMLOOPS, April 4-6, Kamloops Model Railway Days, NMRA PNR 7th Division Spring meet, hosted by the Kamloops Heritage Model Railroad Club. Calvary Community Church Hall, 1205 Rogers Way. Info at pnr.nmra.org/7div/Timetable.shtml.

CANADA, ONTARIO, MISSISSAUGA, April 26-28, Streetsville Junction, NFR-NMRA Regional Convention layout tours and clinics presented by Chris Lyon, Graham Macdonald, Pierre Oliver, Dave Patterson, John Spring, and Paul Taylor. Special Canadian manufacturers show Friday evening. Awards Sunday morning at hobo breakfast. Four Points Sheraton Hotel, 2501 Argentia Road. Call 905-858-2424 for hotel reservations. Details at streetsvillejunction.com.

CANADA, ONTARIO, SCHOMBERG (Toronto area), April 13, 8th Annual Ontario Narrow Gauge Show. Co-sponsored by the Narrow Gauge Madness Gang, Fast Tracks, and Mt. Albert Scale Lumber. Schomberg Community Hall. Info at narrowgauge-madness.com.

ARIZONA, WINSLOW, April 18-21, Winslow Railroad Days, model displays, operating layouts, clinics and family oriented fun. Info at **tucsonntrak.com/ASWMRR/ASWMRR_Winslow_Page.html**.

CALIFORNIA, DUBLIN, April 3-7, NMRA Iron Horse Express PCR Convention, Holiday Inn, 6680 Regional St. Info at **pcrnmra.org/conv2013**.

CALIFORNIA, LOS ANGELES, April 6-7, April 9, and April 13-14, Annual Spring Open House of Sierra Pacific Lines at Pasadena Model Railroad Club, one of the largest HO scale-operating model railroads in the world covering almost 5,000 square feet. 5458 Alhambra Ave. Info at **pmrrc.org**.

CALIFORNIA, SAN BERNARDINO, April 13, Western Prototype Modelers Meet, with model displays, manufacturer exhibits, vendor tables, raffle prizes. Clinics featuring Don DeLay, Michael Gross, Tom Bacarella, and Gary Robinson – plus live BNSF mainline railfanning. At Amtrak/Santa Fe Depot, 1170 West 3rd Street. Info at **railroadprototypemodelers.com** Vendors contact Joe D'Elia at **ppw-aline@att.net** or phone 760-721-3393.

CALIFORNIA, SAN DIEGO, April 1-5, Kids Spring Camp at the San Diego Model Railroad Museum for grades 3-8. Program includes constructing a diorama, create scenery, structures, and buildings their own freight cars. Weathering, trackwork, wiring, and an understanding of electricity are all on the curriculum. Also field trips to the Santa Fe Depot and the San Diego Electric Railway Association at the National City Depot. Visit **sdmrm.org/#/model-rr-camp/4533422272** or call 619-696-0199 for registration requirements and fees.

FLORIDA, RIVERVIEW, April 20, NMRA Sunshine Region Joint Division Meet “A Day of Hands-On Clinics” at Hilton Garden Inn, 4328 Garden Vista Drive. Limited to 60 participants with

pre-registration required. Details at **sunshineregion.org/WesternDivision.aspx**.

GEORGIA, PORT WENTWORTH (Savannah area), April 4-6, 13th Annual Savannah RPM. Usual prototype modelers format with clinics, model displays, vendors, historical societies, and brotherhood. Port Wentworth Community Center on Appleby Road. Info from Bob Harpe at **Rharpe@comcast.net** or Denis Blake at **dblake7@columbus.rr.com**.

ILLINOIS, WATSEKA, April 20, Annual Meeting of Chicago & Eastern Illinois Historical Society includes swap meet, model displays, photography, and railfanning at Woodlawn Junction. Info from Dave Forbes at **altamontc_ei@yahoo.com**.

INDIANA, MIDDLEBURY, April 19-20, NMRA Michiana Division 2013 Education and Training Conference (formerly GLMRS Symposium), includes Friday evening banquet. Info at **michiana-nmra.org**.

MARYLAND, TIMONIUM, April 13-14, June 22-23, and October 26-27. Great Scale Model Train Show. One of the nation's largest shows with more than 800 vendor tables. Hosted by Howard Zane at Cow Palace, Maryland State Fairgrounds. Info at **gsmts.com**.

MINNESOTA, BLOOMINGTON, April 25-28, 28th Annual Sn3 Symposium. Info at **Sn3-2013.com**. At Ramada Mall of America Hotel. Call 952-854-3411 for reservations. Use code CGSN33 for convention rate.

NEW YORK, GARDINER, April 19-20, Semi-Annual Mid Hudson On30 Meet at St. Charles Borromeo RC Church, 2212 Route 44/55. Details at **groups.yahoo.com/group/midhudsonOn30meet/?yguid=120653266**.

OHIO, MARION, April 25-27, Central Ohio RPM Meet at Marion Union Station. Request details from Denis Blake at **dblake7@columbus.rr.com**.

TEXAS, NEW BRAUNFELS, April 6-7, Model Railroad Jamboree. Show at Civic Center 375 S. Castell Avenue and nearby Museum at railroad tracks and San Antonio Street. Request info from Jim Edmonson at **jedmonson@satx.rr.com**.

May 2013

AUSTRALIA, NSW, ALBURY, May 25-26, Annual Model Railway Show, hosted by Murray Railway Modellers. Featuring trader tables, model railway displays from various regions of Australia in N, HO and O scales, and special Thomas the Tank Engine display. Mirambeena Community Centre, 19 Martha Mews, Lavington. Info at **murrayrailway-modellers.com**.

CANADA, ONTARIO, OTTAWA, May 4-5, Ottawa Train Expo, with operating trains, vendor displays, and railroad exhibits. Clinicians include Paul Anderson, Michael Boucher, Allan Egan, Mike Hamer, Chris Lyon, Peter Nesbitt, Ron Newby, Ralph Renzetti, and Don Smith. Carleton University Field House, 1125 Colonel By Drive. Details at **ottawatrainexpo.com**.

NEW ZEALAND, DUNEDIN, May 11-12, Dunedin Model Train Show sponsored by the American Modular Group, at Forbury Park, 146 Victoria Road. Numerous operating layouts including two Sn3, and five New Zealand Railways layouts, plus operating Thomas and Friends layout for kids. Additional details at **dunedinmodeltrainshow@vodafone.co.nz**.

CALIFORNIA, LONG BEACH AREA, May 18, (self-guided) Tour of home layouts in the Long Beach and South Bay area, sponsored by Model Railroads of Southern California. Layout

descriptions and a tour map are available on request from Bob Chaparro at **chiefbobbb@verizon.net**.

CONNECTICUT, COLLINSVILLE, May 31 – June 1, New England/Northeast Prototype Modelers Meet. Info from Dave Owens at **daowens@gmail.com**, or **neprototypemeet.com**.

INDIANA, INDIANAPOLIS, May 2-5, Mile Post 50, Annual Convention of NMRA Central Indiana Division. Banquet speaker is Thomas Hoback, president/CEO of Indiana Railroad Company. Event info at **cid.railfan.net**. Marriott Indianapolis East, 7202 East 21st Street. For hotel reservations call 317-352-1231.

MINNESOTA, BLOOMINGTON, May 16-19, Twin Rails to Twin Cities, NMRA Thousand Lakes Region Convention, hosted by Twin Cities Division. Best Western Plus at 952-854-8200. Info at **thousandlakesregion.org/pages/conventions.html**.

OHIO, DAYTON, May 15-18, Operations Dayton 2013, NMRA Mid-Central Region Convention at Wyndham Gardens Hotel. For hotel reservations call 937-434-8030. Convention info at **mcr2013convention.com**.

OHIO, HILLIARD, May 18-19, 5th Annual N-Scale Weekend, sponsored by Central Ohio NTrak. Info at **centralohiontrak.org**.

OHIO, MIAMISBURG (Dayton area), May 15-18, Operation Dayton 2013, NMRA-MCR Convention with clinics, model contests, layout tours, and railfanning. At Wyndham Gardens Hotel. Info at **MCR2013convention.com**.

PENNSYLVANIA, PHOENIXVILLE (Philadelphia area), May 3-4, 21st National Model Trolley Meet, hosted by East Penn Traction Club at Greater Philadelphia Expo Center, 1601 Egypt Road. Info at **eastpenn.org/meet.html**. Vendors contact Charles Long, 227 Locust Rd, Ft. Washington, PA 19034-1425.

PENNSYLVANIA, PHOENIXVILLE (Philadelphia area), May 18, Narrow Gauge Modular Meet, Kimberton Fair Grounds. Additional info from Lee Snover at **leetown@centurylink.net**.

Future 2013

CALIFORNIA, McCLELLAND (Sacramento area), July 17-21, National Summer Steam Up, small scale live steam event. HQ at Lions Gate Hotel & Conference Center, 3410 Westover Street. Details at **summersteamup.com**.

CALIFORNIA, PASADENA, August 28-31, 33rd National Narrow Gauge Convention. Nationally recognized speakers include Eric Bracher, Jack Burgess, Malcolm Furlow, Steve Harris, and Burton Maxwell. Modular displays at HQ hotel include California South Coast Modular, Central Valley Modular, California Central Coast Modular, and North Coast Narrow Gauge, plus vendor exhibits. Tours include numerous layouts and visit to the steam operations at Disneyland, Knott's Berry Farm, and the backshop at the Fillmore and Western Railway. At Hilton Hotel, 199 S. Los Robles Avenue. Full details at **33rdnngc.com**.

CALIFORNIA, RICHMOND, June 22, San Francisco Bay Area Prototype Modelers Meet, Hosted by BAPM. St. David School, 871 Sonoma Street. Info at **bayareaprototypemodelers.net**.

CALIFORNIA, SAN BERNARDINO, September 25-29, NMRA Pacific Southwest Region Convention with contests, manufacturers displays, 50 clinics and raffle with grand prize of Tenshodo UP Big Boy. Prototype tours include Union Pacific hump yard, the Victorville CEMEX plant, and the Columbia Park Live Steamers. At Hilton Hotel 285 E. Hospitality Lane. Details at **psrconvention.org/sb13/index.html** or contact Bob Mitchell at **CajonDivision@coastinet.com**.

CALIFORNIA, SAN DIEGO, June through August, Kids Summer Camp at the San Diego Model Railroad Museum for grades 3-8. Program includes constructing a diorama, create scenery, structures, and buildings their own freight cars. Weathering, trackwork, wiring, and an understanding of electricity are all on the curriculum. Also railroad history, culture, and science with field trips to the Santa Fe Depot and the San Diego Electric Railway Association at the National City Depot. Visit **sdmrm.org/#/model-rr-camp/4533422272** or call 619-696-0199 for registration requirements and fees.

COLORADO, LONGMONT, December 8-9, Annual Train Show, sponsored by Boulder Model Railroad Club, with operating layouts, prize winning models, vendor tables, and layout raffle. Boulder County Fairgrounds. Info at bouldermodelrailroadclub.org FLORIDA, BRADENTON, October 11-13, Manatee Rails, NMRA Sunshine Region 2013 Convention, at Courtyard Marriott and Bradenton Convention Center. Info at **sunshineregion.org/Conventions.aspx**.

GEORGIA, ATLANTA, July 14-20, NMRA Annual Convention. Cobb Galleria Centre with convention HQ at adjacent Renaissance Waverly Hotel. Info at **nmra2013.org**.

GEORGIA, ATLANTA, July 18-20, National Train Show, in conjunction with annual NMRA Convention. Cobb Galleria Centre, 2 Galleria Parkway. Info at **nmra2013.org**.

IDAHO, BOISE, June 26-30, Snake River Special, NMRA Pacific Northwest Region 2013 Convention. Info at **pnr.nmra.org/3div/2013.html**.

ILLINOIS, COLLINSVILLE (Metro St. Louis), August 2-3, St. Louis RPM, at Gateway Convention Center. Info from John Golden at **golden1014@yahoo.com**.

ILLINOIS, LISLE (formerly at Naperville), October 17-19, 20th Annual RPM-Naperville Conference featuring prototype models, vendor displays, and clinics with blue ribbon panel of speakers including Bob Van Arnem, John Brown, Richard Hendrickson, Tony Koester, Clark Propst, Mont Switzer, and Tony Thompson. Friends of the Freight Car dinner Thursday. At Wyndham Lisle Hotel (new venue), 3000 Warrenville Road, Lisle. Call 630-505-1000 for hotel reservations. Event hosted by Joe D'Elia. Info at **railroadprotypemodelers.com/naper_meet.htm**.

KANSAS, OLATHE, June 13-16, NMRA Mid-Continent Region 2013 Convention. Info at **mcor-nmra.org**.

MASSACHUSETS, PITTSFIELD, November 7-9, Fine Scale Model Railroader Expo. Billed as "the only show dedicated to the art of scale model structure building," with model displays, vendor exhibits, and a layout tour of Dick Elwell's Hoosac Valley Lines. All-star list of clinician/speakers include Jon Addison, Michael Duggan, Dave Frary, Brett Gallant, Ken Hamilton, Bernard Kempinski, Marty McGuirk, Bob Mitchell, Dave Revelia, and Bill Sartore. Expo info at **modelrailroadexpo.com**. Event at Berkshire Crown Plaza Hotel, One West Street. Call 413-499-2000 for hotel reservations.

NEW MEXICO, ALBUQUERQUE, June 6-9, Rails Along the Rio Grande, NMRA Rocky Mountain Region, Rio Grande Division 6 Convention, at Marriott Pyramid North. Info at **rarg2013.org**.

NEW YORK, GARDINER, October 25-26, Semi-Annual Mid Hudson On30 Meet at St. Charles Borromeo RC Church, 2212 Route 44/55. Details at **groups.yahoo.com/group/midhudsonOn30meet/?yguid=120653266**.

OHIO, MASON (Cincinnati), June 5-9, 29th Annual National Garden Railway Convention. HQ at Great Wolfe Lodge, adjacent to Kings Island Amusement Park. Info at **ngrc2013.com**.

OREGON, PORTLAND, June 28-30, West Coast 2013 Garden Railway Regional Meet, hosted by Rose City Garden Railway Society. Ingo at **rcgrs.com**.

TEXAS, IRVING, May 29 - June 2, Lone Star Express, 2013 NMRA Lone Star Region Convention at Sheraton DFW Hotel. Call 800-345-5251 for reservations request 2013 Lone Star Region rate.

WISCONSIN, MILWAUKEE, June 26-30 National N Scale Convention. Info at **nationalnscaleconvention.com**.

WISCONSIN, WEST ALLIS (Milwaukee area), November 9-10, Trainfest 2013, hosted by Wisconsin Southeastern Division of NMRA.

Future (2014 and Beyond)

FLORIDA, COCOA BEACH, January 9-11, 2014, Cocoa Beach RPM meet.

INDIANA, INDIANAPOLIS, July 3-10, 2016 NMRA National Convention and National Train Show.

MAINE, AUGUSTA, 2016, date TBA, 36th National Narrow Gauge Convention.

MISSOURI, KANSAS CITY, September 3 -6, 2014, 34th National Narrow Gauge Convention.

OHIO, CLEVELAND, July 13-19, 2014, NMRA National Convention and National Train Show.

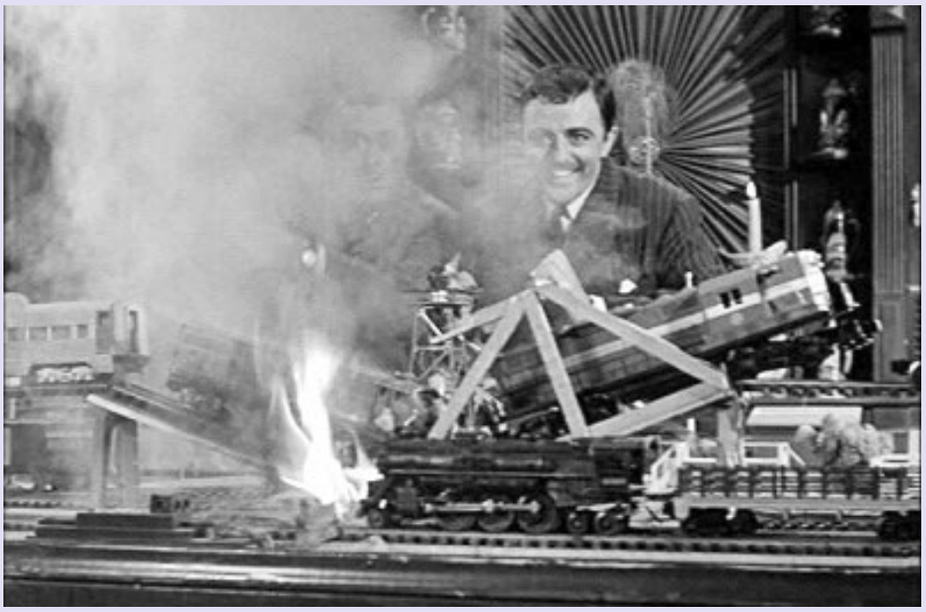
OREGON, PORTLAND, August 23-30, 2015 NMRA National Convention and National Train Show.

TEXAS, HOUSTON, 2015, date TBA, 35th National Narrow Gauge Convention. ■

Planning to destroy your layout

Reverse Running: Stepping outside the box with a contrary view

by Joe Fugate



In his now famous book published in the 1970s, *The Mythical Man Month*, Fred Brooks (who worked for IBM) talks about project concepts appropriate to the then-new computer software development industry.

One of those concepts - plan to throw the first one away - also applies quite well to model railroad layout building.

The idea is that you learn so much on the first project that you really should throw it out and start over, using the second attempt as the keeper. We covered this "expect the first one to be throw-away" in MRH issue 1's now classic *Reverse Running* column, "Chainsaw Layouts".

With a chainsaw layout you go in knowing full well the layout you're building is not a keeper – it's a training ground that you don't let yourself get attached to.

While the chainsaw layout concept is a good one, there's value in taking it a step further: consider deliberately incorporating reuse into your construction techniques. Some parts of a layout take more time and money, so why not build reuse into the picture

from the beginning? No need to trash everything when you start layout project number 2.

For example, turnouts are one of the more expensive parts of a layout's infrastructure. What might you do to make sure turnouts can be easily reused?

Many experienced modelers let turnouts "float" between the connecting track sections that are fastened down. Only the rail joiners hold the turnout in place mechanically. Don't solder the rail joiners, just make sure all rails have feeder wires.

Another reuse trick is water-soluble ballast binder like white glue. To pull up turnouts later you just soak the ballast with wet water, then let it sit for an hour or so while the ballast softens. Next, slide the rail joiners off the ends of the turnout, clip the feeder wires, and use a putty knife to pull the turnout up intact.

Soaking the turnout later in a tub of warm wet water (water with a few drops of liquid detergent added to break the surface tension) will make it easy to remove any remaining ballast.

Similarly, don't fasten structures or bridges in place permanently.

With a few chainsaw layouts under your belt, and keeping in mind methods that allow easy removal of components on the layout, you will build up quite a collection of reusable components. This will give you a huge leg up on future layout projects.

Even though the chainsaw layout concept is a good one, don't take that so literally that you throw everything away. Preserve your successes and use them to give you a head start on that next chainsaw! ☑

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Derailments

humor (allegedly)

Play on YouTube only - not allowed to embed

Playback problems? Click to try a different version.

For a change of pace this issue, here's a fun derailments video (in the literal sense of the word) that's sure to bring out the kid in all of us!

Just think what it would have been like as a kid to set up different crash scenarios like this, be able to video it, then play it back instantly. Or better yet, post it online for the *whole world* to see. The mind boggles ...

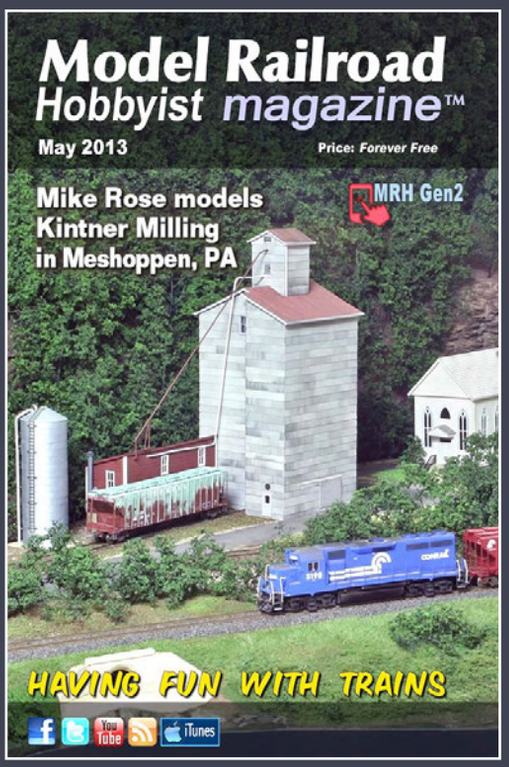
If you're the first to **submit a bit of good humor** and we use it, it's worth $25!

Reader Feedback (click here)

For the love of model trains

Coming in May

- Mike Rose models Kitner Milling in Meshoppen, PA
- Freight trucks, 1900-1960
- Modeling Erie boxcars from the 1950s finale
- Building a laser kit, step-by-step
- Another $500 starter layout contest winner
- *...and lots more!*



More Derailments humor ...

Two drunks were walking down a New York City street when one fell down the subway steps.

When he got back up to the top again, he retorted to his drinking partner, "Boy you should see the train set in *that guy's* basement!"

A large two locomotive Amtrak train was crossing the country. After they had gone some distance, one of the engines broke down. "No problem," the engineer thought, and carried on at half power. Farther on down the line, the remaining engine broke down, and the train slowed to a dead stop. The engineer decided he should inform the passengers about why the train had stopped, and he made the following announcement:

"Ladies and gentlemen, I have some good news and some bad news. The bad news is that both engines have failed, and we will be stuck here for some time. The good news is that you decided to take the train and not an airplane."