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March 2011

HAVING FUN WITH TRAINS

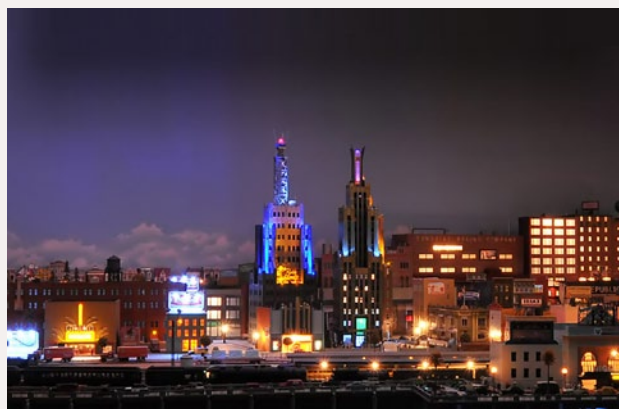


Kermit Paul's
Lone Pine and Tonopah
NMRA X2011 West layout on tour

step-by-step:
**Track is a
model too!**
and lots more, inside ...

Installing a framed-wood trestle
Aging wood with acrylic washes





Front Cover: Kermit Paul's well-done layout really impresses when you turn out the lights! Kermit's got an obvious electronic bent as you can see from this photo. Inside you can learn more about Kermit and his layout, one of many that will be on tour this summer at the "unconventional convention" – X2011 West in Sacramento, CA.

ISSN 2152-7423

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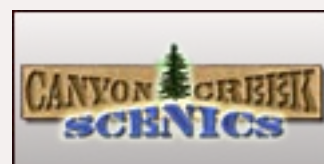
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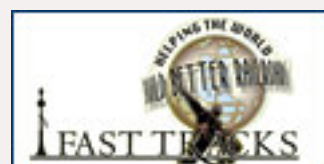
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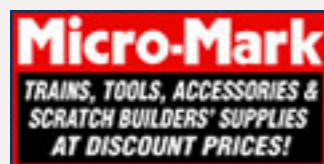
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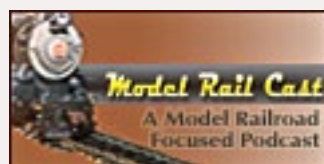
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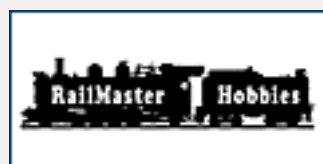
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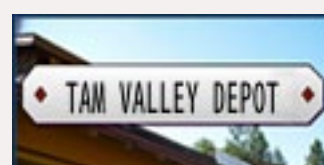
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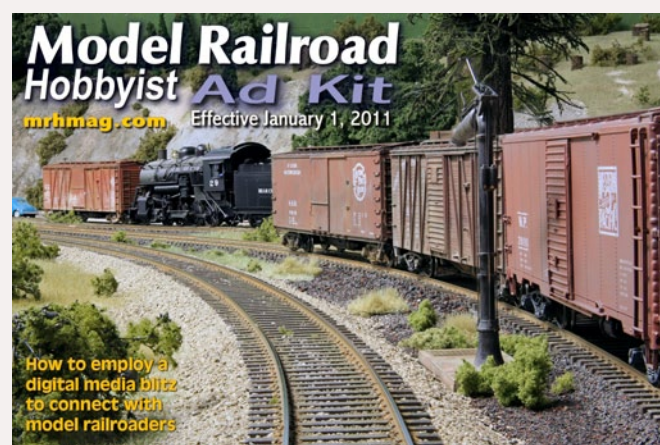



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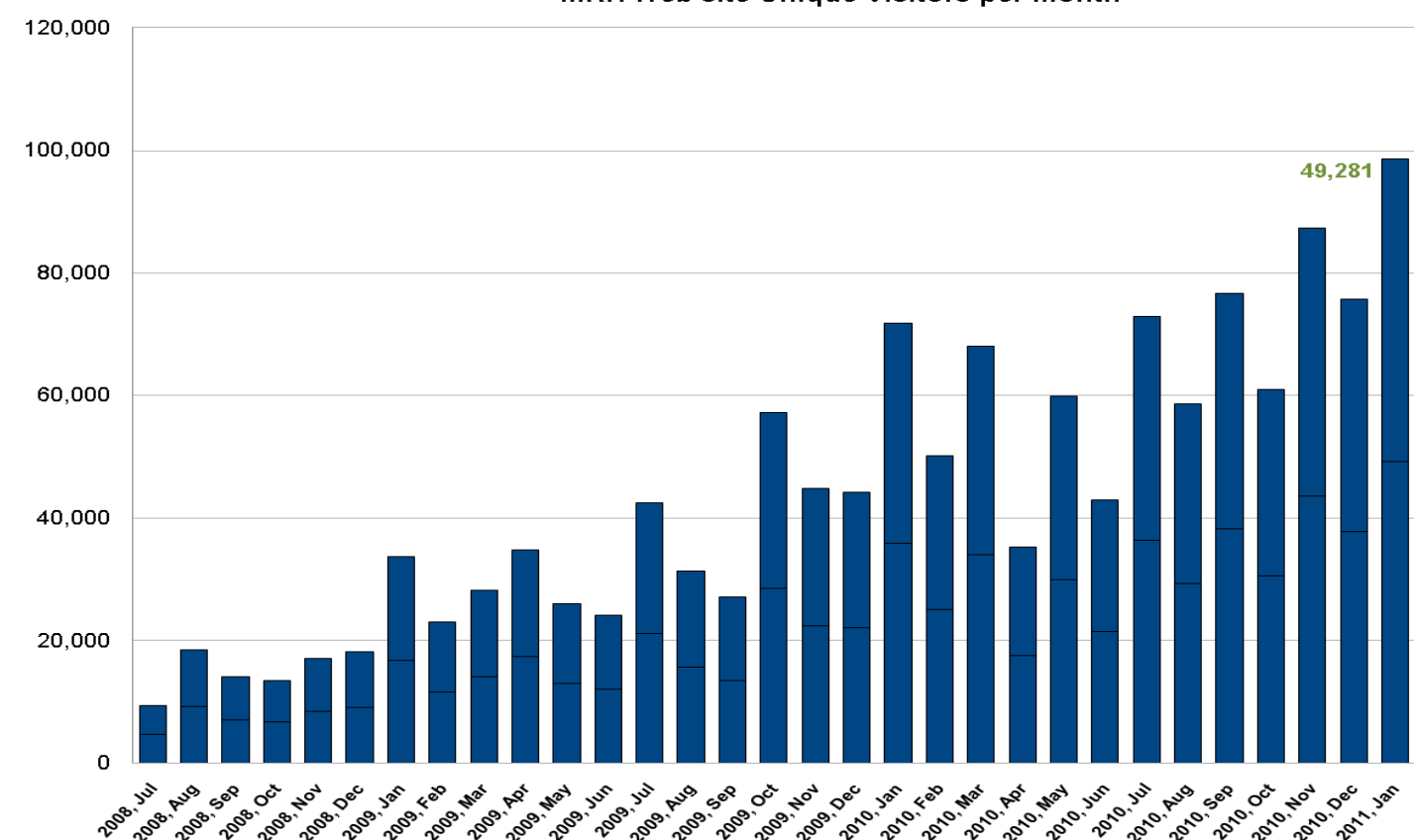
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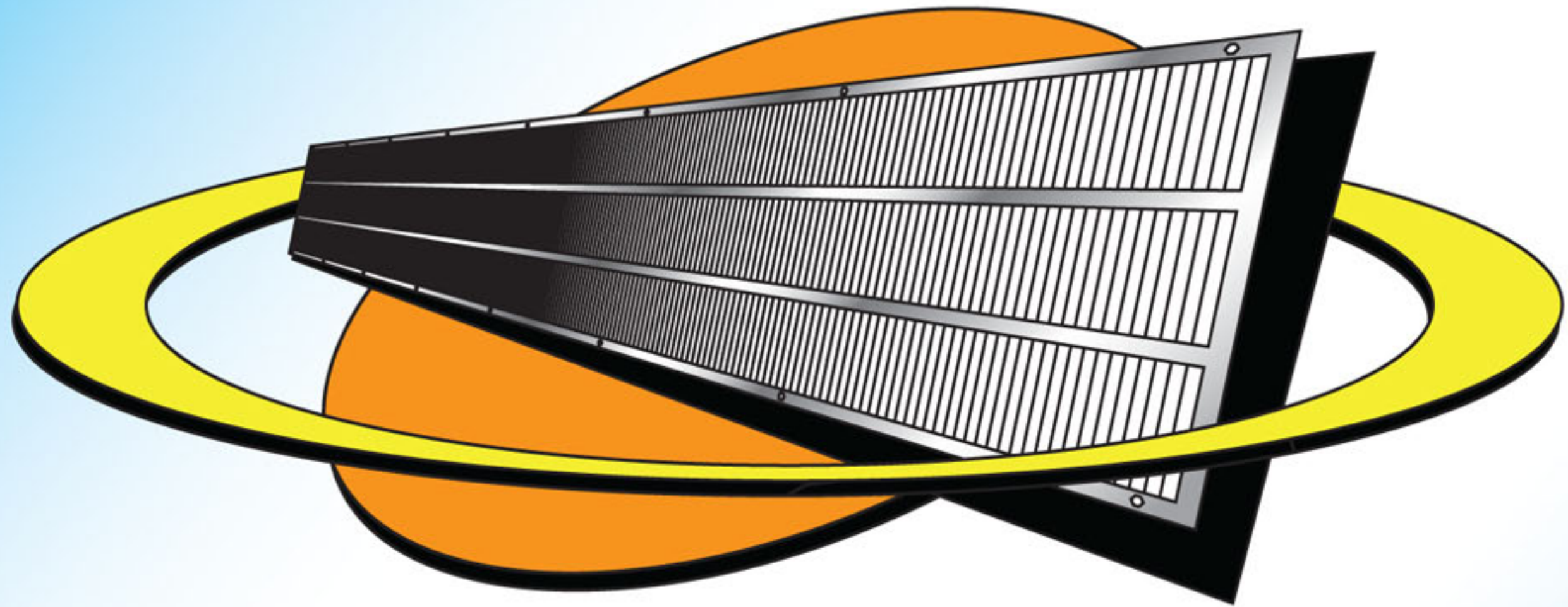
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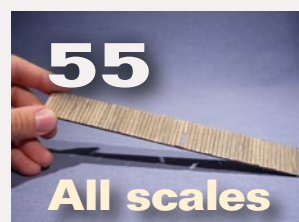
Main Features

Table of contents

Columns



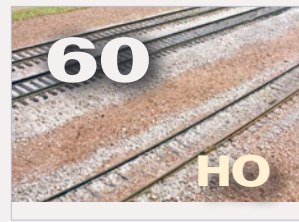
Coffman Clamps
Tool Shed: one evening project!
by Jack Burgess



Aging wood with acrylics
Weathered wood hints and tips
by Galen Gallimore



Kermit Paul's Lone Pine & Tonapah
An HO scale X2011 West Layout
by Jack Burgess



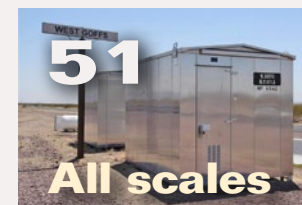
Track is a model too
Step-by-step discussion of how to make your track more realistic than ever
by Greg Baker



Build a Billboard
Scenery Scene: one evening project!
by Charlie Comstock



First Look: Corn stalks
New product from MRC - JTT
by Jeff Shultz



West Goffs
Modelgenic modern prototype scene
by Josh Baakko



Having Fun With Trains
MRH's new slogan
by Joe Fugate

82 Wood Trestle, part 1
Up the Creek
by Charlie Comstock

87 Roundhouse painting, bricklaying, lighting
Modular Adventure
by Les Halmos

95 RuNNing on Empty
Comme-N-tary
by John Drye

100 Weathered Wood Fence
Lite and Narrow
by Lew Matt

105 March Model Railroading News
MRH News and Events
by Richard Bale

119 Cheap Freight Cars Galore!
Reverse Running
by Joe Fugate

16 Bonus downloads this issue!

Other Features

12 Having fun!
Editor's Soapbox *by Charlie Comstock*

21 MRH Q - A - T
Questions, Answers and Tips

14 MRH Staff Notes
Where's the media?

121 Derailments
Humor (perhaps)



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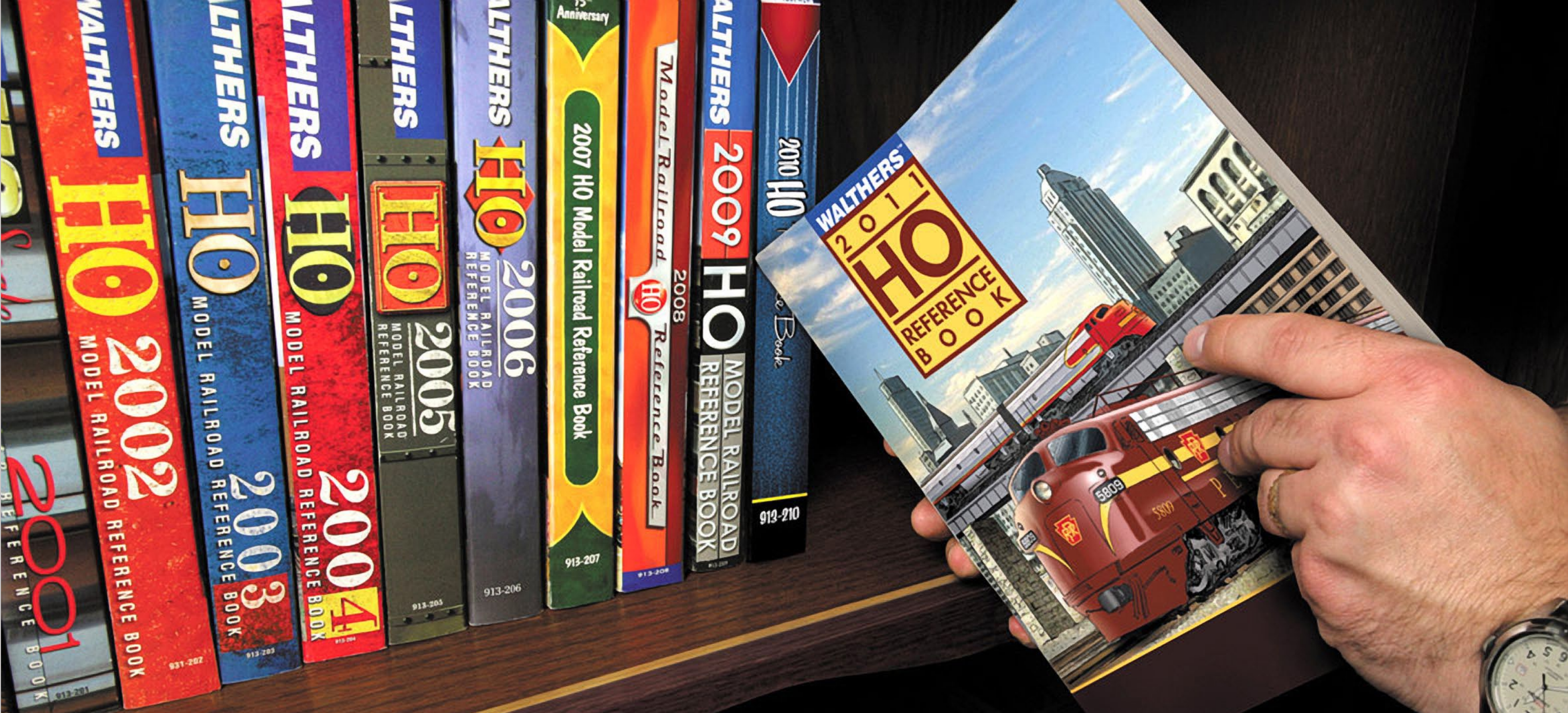
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[Contents](#)

[Index](#)

Questions?

We have answers!

- What prototype should I model?
- What's the best track plan?
- How do I build roadbed?
- How do I lay flex track?
- Whats an affordable turnout control?
- How do I wire for DCC?
- How do power districts work?
- How do I deal with shorts in DCC?
- How do I speed match locos?
- How do I install DCC loco lights?
- How do I install a DCC sound decoder?
- How do I build a trestle or other bridge?
- What's the best way to install a bridge?
- How do I hand paint a backdrop?
- How do I make realistic scenery terrain?
- How do I make streams and rivers?
- How do I make roads?
- How do I make a static grass applicator?
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About the Editor



Charlie Comstock has been a regular columnist, author, and on the editorial staff of *Model Railroad Hobbyist Magazine* since its inception.

To learn more about Charlie, [click here](#).

EDITOR'S SOAPBOX: Having fun!

Changing the guard ...



I've still not recovered from the shock. Joe Fugate phoned me one night to talk about MRH stuff and casually mentioned, "I'm promoting you to editor."

What? Why would you do a fool thing like that? I've been involved with MRH (sometimes even contributing) for what seems like nearly forever. I've written articles, interviewed layout owners, edited content, produced video, pasted up articles, and assembled issues of the magazine itself several times. But why me? I guess Joe had confidence in me I wasn't feeling at the moment! Or maybe he was desperate!

Well Joe. I'm honored, and to you, the readers of MRH I'll do my best to maintain the quality of our little model train magazine.

Phew! And now on to something that's model railroad related.

It seems sometimes that the number of well-known (or outright famous) model rails that are tearing out their layouts might become an epidemic. Why would someone destroy a gorgeous, fully finished model railroad? This is largely speculation but, because they're bored?

If you're a layout builder and your layout is done, now what do you do? There are some modelers who live for the construction process. When their layout is done, what's left to build? So they decide to start over!

If your desire was for a railfan layout when you started, but you've caught the operations bug (more like a flu actually) since then, a layout that was great for watching trains roll by is likely not well optimized for op sessions.

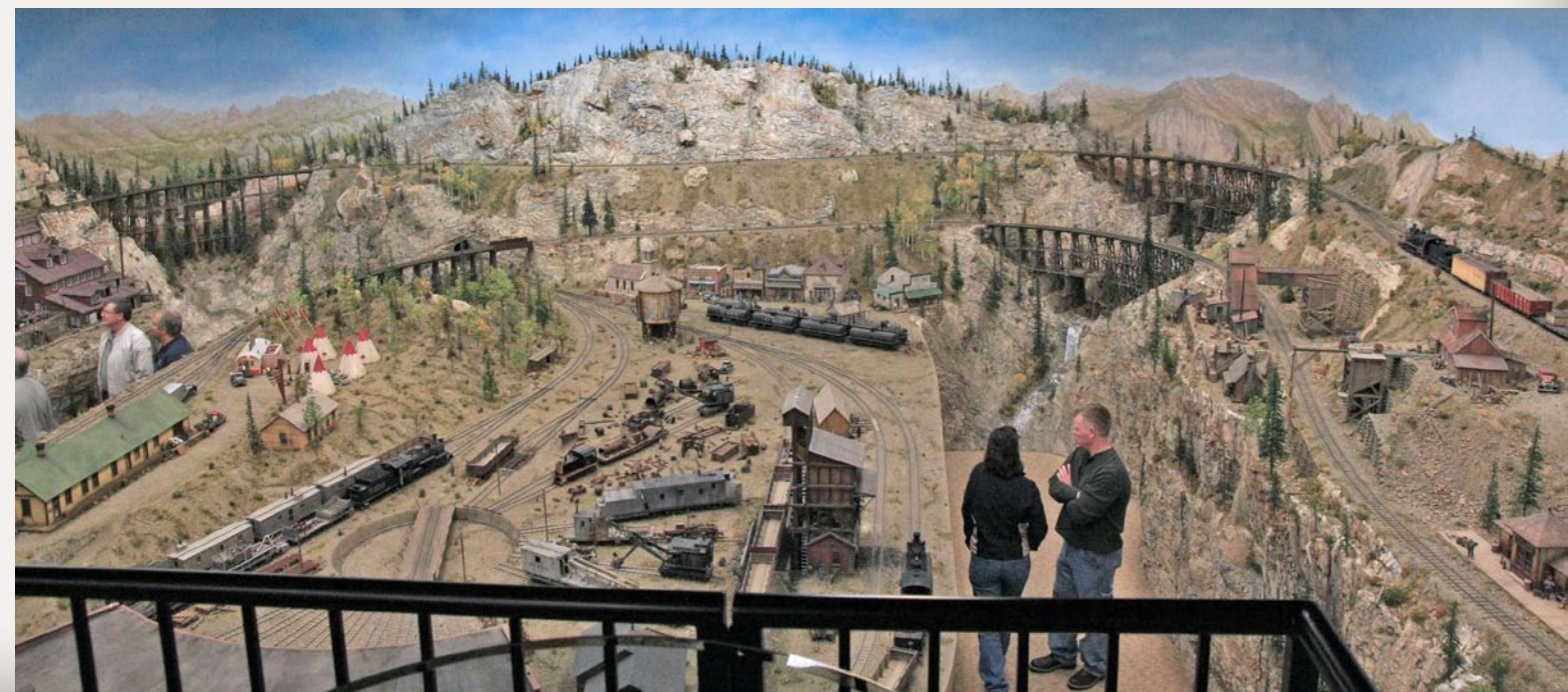
Etc.

Which brings me to my main point – If you're not happy with your layout, it isn't fulfilling its purpose – to have fun. A layout that's not fun either

becomes a dust collector or it gets torn down to make way for a new layout.

But over time we all change don't we? Since we're all changing, both physically and in our attitudes, I believe there's no such thing as a lifetime layout. The nod under that was no trouble at all when you're 50 can become quite an impediment at 70. The prototypically incorrect track arrangement at town X which didn't bother you 10 years ago starts gnawing at you if you catch the prototype modeling disease or conversely, the yard throat modeled exactly after the prototype may be recognized for an operational bottleneck on a model railroad. Heck, folks have been

Figure 1: Tom Miller's Fn3 Little Colorado was designed for railfan-ning. There's lots of gorgeous scenery, the trackplan is a convoluted loop for continuous running, and there are very few lineside industries to be served.



know to shift scales simply to get big enough detail so their older eyes can see it.

Don't get hung up on the concept of the lifetime layout. There's no such thing, only the layout you're working on now.

I don't recommend changing your layout as often as you change underwear – major changes are something to think about seriously. But if your layout is gathering dust because

you're no longer interested in it, maybe it's time.

If you don't have space for the layout you need, maybe you need to join a club. If no clubs are available, maybe its time to start one.

If you're not having fun with your trains, what are you having?

Charlie

Figure 2: Dave Adams is operations oriented. His On3 Durlin Branch features a single track mainline and branch with enough sidings for multiple opposing trains to run at once. Trains deliver passengers and freight to multiple rail-served locations. Dave's tracks are close to the aisle so crew can easily operate the trains couplers.



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Notes from the

MRH STAFF

Where's the media, leading articles last issue, bonus downloads, and more ...



Where's the media?

Most of the article submissions we're getting these days don't have any media with them, which we think is a

real shame. One of the powers of our digital medium is the ease with which we can include media: animations like our click-n-spins, and of course, video.

With inexpensive HD video cameras available, there's little reason to not include some media with your article submission! And we pay a premium rate for click-n-spins and video, so think beyond just still photos and text when you're thinking of submitting an article, and the check will be larger.

We're not talking anything more than 2-5 minutes of video, so it shouldn't be that tough to do.

Let's say you want to do a piece on modeling a caboose. Our ideal submission will include:

- Text of the article
- Still images
- Captions for all images
- Click-n-spin of the finished model
- Video commentary on the model
- Video footage of the model running on a layout through some nice scenery

Doing a click-n-spin: To make a click-n-spin, you need to put the model on an inexpensive lazy susan and take at least 12 photos as you spin the model (30 degrees at a time), then send the images to us.

We'll stitch the images together using some special software into the final click-n-spin. Use a digital camera (set on manual exposure) and tripod.



Last issue's rating

The top 5 articles in the Feb 2011 issue:

- 4.6 Erik Kalinski's Pacific & NW layout
- 4.6 Modeling a Modern Boom Car
- 4.5 Weathering with Chalk and Alcohol
- 4.5 Not Your Father's Convention
- 4.4 Rotary Knob Turnout Controls
- Issue overall: 4.7

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Please continue to provide ratings for articles - the more people who take a few moments to rate the articles, the better able we are to judge what our readers would like to see more of.

It's nice to see Jack Burgess' guest editorial on "It's not your father's convention" did so well. We think the X2011 West convention committee is doing a fantastic job with this summer's NMRA National Convention, and we're really looking forward to it.

If you can at all make Sacramento this year, it should be one of the best conventions in recent memory, and stoke your model railroading motivator fire-box for many months afterwards!

The MRH web site

In case you haven't noticed, we've given our web site a face lift. The site now includes advertisements, allowing us to continue to fund your forever free magazine and videos.

Our site traffic is growing significantly and we're seeing the need for moving to larger, more powerful servers.

With all this new growth, our site's performance has been a somewhat iffy, so please bear with us. We're doing everything we can to enhance site performance and make the transition to new, more powerful servers as smooth as possible.

Our new hosting will give us lots of room to grow, so we're expecting that we can stay put here for quite a spell.

As to the ad-enabled part of the new web site, we're not into a lot of annoying, in-your-face advertising. We prefer classy and helpful.

Here's what you'll see on our new web site as to advertising:

- 1. Featured sponsor button:** When you visit a page, we display one of our sponsoring advertiser logos in this space. at the top of the menu bar. We randomly rotate through all our sponsor logos and quietly display them here. When you see a sponsor that looks interest, please click their logo and check out their offerings.
- 2. Slide show header:** Our new slide show header displays a new image every 7 seconds. This header displays on every page and includes both our "patented" "Yes, it's a model" photos, and hobby vendor ads. If you want more information on anything displayed here (including more info on the Yes, it's a model photos), just click the image.
- 3. Banner ads on every post:** At the bottom of the first post on every thread, we've added a banner ad space. The idea is simple, to-the-point banner ads for model railroading products and specials you may not have been aware of.

So that's it. We feel our new ad-enabled web site presents classy, helpful ads to model railroaders who are doing the hobby. No popups or in-your-face advertising, please!

The screenshot shows the MRH website interface. At the top, there's a navigation bar with 'Magazine Advertisers Community News' and a search bar. A featured sponsor button for 'ALPINE DIVISION SCALE MODELS' is visible. The main content area features a slide show header with a train image and the text 'That looks suspiciously like a Fairbanks Morse 5-Axle C-Liner'. Below this is a post titled 'Detailing Reading C424s' by 'nbrodar'. The post includes a 'Penn Lake' logo and a photo of a train. A banner ad for 'The ZEPHYR xtra' is displayed at the bottom of the post. The right sidebar contains a user profile for 'joef' with links to 'Recent posts', 'Blogs', 'Discussion forums', 'Community', 'Groups', 'Search', 'Create general content', 'My account', 'Dashboard', 'Contact us', and 'Log out'. Below this is a 'Who's new' section with a list of users and a 'Recent blog posts' section with a list of articles.

Figure 1: The new MRH web site look-and-feel now includes ad-enabled spaces, shown here as items 1, 2, and 3. Ad space 2, our new slide show header, replaces our old static random header with slide show images that change every 7 seconds. The slides include Yes it's a model images like our old header as well as hobby ads.

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Where is the hobby going?

One of the more interesting staff discussions we've been having lately concerns where we think the hobby is going in the next few decades.

One question we're asking is: what does the hobby need to keep it healthy? We have a number of ideas, but we'd also like to hear from you, our readers, about what the hobby needs to stay healthy.

One concern we see raised has to do with the popular steam-to-diesel transition era and how more modelers today never saw steam in main-line revenue operation.

Is that really a concern, we ask?

We think of World War II plastic model dioramas, and how popular they are. How many of those modeling World War II were actually *in* World War II? Darn few these days, we suspect.

Historical modeling can be an interest because the period is *just so darn interesting* and it's not a requirement that you actually lived during the period. Today's modern media can bring steam to life in a way that still captures the imagination.

Witness the popularity of the *Polar Express* book and movie. That's a steam train! Ironically, it's mostly model railroaders who realize steam

March 2011 Premium Extras!

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isn't in regular revenue freight operation any longer! There's also the ubiquitous steam loco in old west movies, and the *Back to the Future* trilogy also featured a steam train prominently in movie 3.

Speaking of *Back to the Future* part 3, did you catch Doc Brown's comment that he was "just doing a little model railroading" when explaining his planning mockup of the train to Clara?

First Monday of the Month

We have people asking when each monthly issue comes out, and the answer is: the first Monday of every month. So if you're wondering when you'll see the next issue, just look at the calendar for the first Monday of the month and that's it!

That said, we do try to upload each issue to the mrhmag.com web site a few days early. This lets MRH forum regulars grab an "early" download. We're figuring these early-bird readers will let us know if we really messed up something (like a download script or ad link) so we can get 'em fixed before sending out the regular weekly subscriber e-mail to come-and-get-it.

Hang out on the MRH site the weekend before the first Monday of the month – the new issue may already be available.

Please mention MRH

When you shop one of our advertiser's web sites and make a purchase,

please mention to them you saw their ad in Model Railroad Hobbyist. That little extra bit of effort on your part is like money in the bank to us.

You might be surprised (or maybe you wouldn't be surprised) how many advertisers we have who tell us they never hear anyone mention MRH when placing an order. We have to believe some of you aren't making your presence known.

Please mention MRH when buying from an advertiser!

Shows we're doing in 2011

We're going to the following shows, in force in 2011. Come stop by the booth!

- **NMRA National Train Show**
(Sacramento, CA) - Jul 7-10, 2011
- **National Narrow Gauge Convention**
(Hickory, NC) - Sep 6-11, 2011
- **Fine Scale MR Expo**
(Peabody, MA) - Oct 12-16, 2011
- **Naperville RPM Meet**
(Naperville, IL) - Oct (date yet to be announced), 2011
- **Craftsman Structure Convention**
(Mansfield, MA) - Nov 2-6, 2011
- **Trainfest**
(Milwaukee, WI) - Nov 11-14, 2011

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MRH

Questions, Answers and Tips



QUESTIONS AND ANSWERS

Q: I'm starting scenery on my new layout and I'm wondering what should I do first, the ground cover or the track ballast?

A: Start with the ground cover. Even a basic coat of latex paint color and a little texture – dirt, sand, ground foam, static grass, weed clumps – gives you an easy start on scenery and takes away the “Plywood Pacific” look.

It's surprising how much progress you can make by progressively adding to scenic effects, instead of trying to create a fully furnished scene from scratch.

Build your scene up in easy layers. Carry the basic scenery right up to the

edge of the roadbed or the ties, and then ballast after the trackwork has been “run in” and tested for a while.

It's very easy to get a nice looking edge when you do the ballast last. If you do ballast first, there always seems to be paint or foam creeping into the wrong places.

— Joe Brugger

Q: How do I measure and build model railroad grades?

A: A railroad grade that rises two units vertically for every 100 units it travels horizontally is a 2% grade – that is two in one hundred. A 1% grade is one in one hundred. In model railroad terms, a 1% grade climbs one inch for every 100 inches it travels.



Figure 1: Track is painted and scenery brought up to the roadbed edge before ballasting on the Willamette Model Railroad Club layout.



Figure 2: Completed ballast laps over the edge of scenery previously applied to the Willamette Model Railroad Club layout. Scenery is built up in layers, with grass, bushes and signs added on top of basic ground cover.

There are many ways to measure grades on a layout.

Method 1: One model railroading old-timer I knew used jig-sawed segments of $\frac{3}{4}$ inch plywood as his subroadbed. He would screw the plywood in place at the bottom end of the grade, then marked the 25" point on a long level and slid a spacer under the level until the bubble was centered.

A $\frac{1}{4}$ inch rise or drop in 25 inches gave 1%, a $\frac{1}{2}$ inch rise or drop gave 2% and so on. He then set the risers under the roadbed.

Method 2: MRH advertiser Micro-Mark sells devices that can be placed on the

roadbed to measure the steepness of a grade. One is a "precision angle gauge" and the other is a "miniature digital level". Just [go to the Micro-Mark site](#) and type one of the above phrases into the search box.

Method 3: Using a laser level (available at most do-it-yourself stores), you can also measure vertical elevations at various points along a grade to determine how fast it is rising.

Because many floors are not 100 percent level, many modelers snap a chalk line at a fixed elevation around their walls and use that as a reference point to make measurements.

When installing a grade on a model railroad, be careful to avoid abrupt vertical grade changes (vertical curves) in the track. The guy building the railroad with $\frac{3}{4}$ inch plywood had no problem with these because the wood wasn't flexible enough that he had much of a problem.

If you think about it, you can see why abrupt vertical curves can be a problem.

Imagine if the track grade changes more than half a coupler knuckle height in the distance of a 40-foot HO car length. Now the cars in your train will start coming uncoupled when you hit the grade change!

The links below contain more insight on roadbed alignment, including dealing with grades and vertical curves.

— Joe Brugger

Helpful trackwork links:

Good clinic trackwork clinic notes

http://bellsandwhistles.us/modelrailroading/Clinic06_handout.pdf

Prototype civil engineering trackwork guidelines

<http://babel.hathitrust.org/cgi/pt?id=mdp.39015021053460>

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Q: What is the best tool to use in cutting HO track?

A: I have three tools I use, depending on my need for speed, cleanliness of cut, or even how tight an area I may be cutting in. Whether or not the track is also in place can influence this as well.



The best combination of speed and convenience I've found are rail nippers, such as these Flush Cut Rail Nippers from [Micro-Mark](#) (shown on the left – type **flush cut** into

the search box), or the Xuron Rail Nippers, found at [Walthers](#) and at most hobby shops (seen at the right – type **xuron** into the search box).



These tools are best used with track that hasn't been laid yet, since they can put a lot of sideways torque on the track, breaking the little plastic studs that hold the rails to the ties. Another problem with rail nippers is that you usually end up with one clean side and one rough side, so even discounting the torque problem they aren't the best for cutting gaps in track that is already in place.

For that, I get the cleanest cut from a razor saw such as the one sold by [Micro-Mark](#) (search for **razor saw**). This can also be the slowest way to cut track, and you need a certain amount of room to each side of the track for the saw stroke.

The final method, a Dremel type motor tool with a cutting disc, is fast, doesn't require much side clearance (although you'll want to protect anything nearby from the sparks thrown off) but can leave a larger gap in the tracks, since it can't cut any narrower than the width of a cutting disc. It also does not torque the track like rail nippers.

— *Jeff Shultz*

Q: I'm having problems with dirty track and wheels. What's the best way to

clean my track and wheels? And once I clean them, is there any way to keep them from getting dirty so fast?

A: Keeping track clean is like apple pie and chili recipes – everybody has one, and everybody says theirs is the best. With the arrival of sound systems, loss of contact is pretty obvious and that much more annoying.

There are two schools of thought, wet and dry.

“Wet” track involves wiping the track down with a substance like CRC 6-26 tuner cleaner, Wahl clipper oil, Conduct-A-Lube or even synthetic automatic transmission fluid. The substances leave a film that inhibits arcing and slows oxidation of the rail. Applied in



moderation, the lubes don't affect traction very much.

"Dry" track means cleaning with an evaporating solvent like lacquer thinner (keep it away from your skin and ventilate the fumes) or 90% drugstore alcohol. After cleaning, some modelers apply a substance like No-Ox from Bar Mills (go to the [Walthers](#) site and type **no-ox** into the search box). No-Ox can also be found at electronics supply houses.

The idea is to have a completely smooth surface for good contact. Other "dry" systems include metal polishes like Flitz that do the same thing.



Centerline track cleaning car, available from many model railroading hobby shops and online sources.

Lots of tools are available: Atlas sells a track vacuum that picks up dust and small bits of junk. The Centerline heavy roller cars (photo below) are very good for applying substances, or can be used dry to wipe up cleaner residue. Several companies sell kits to build masonite sliders that fit under a freight car and polish the rail head (also see [MRH issue 3](#) for an article on how to build your own heavy-duty masonite slider track cleaning car). Wine corks and hard rubber blocks are good for polishing crud off the tracks, but avoid strong abrasives like sandpaper and emery cloth that will scratch and wear down the rails.

Converting rolling stock from plastic to metal wheels will drastically reduce the amount of black crud accumulating on the rails and let you go longer between cleaning sessions. Keeping the overall railroad room clean and vacuuming up dust on the layout also makes a big difference. Our club, housed in a "tight" basement with a latex-sealed concrete floor, uses the dry system and runs a Centerline car around the mainline before the monthly operating sessions.

The extensive track-cleaning discussion at <http://model-railroad-hobbyist.com/node/2726> is well worth careful study.

— Joe Brugger, Jeff Shultz



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TIPS

the wiring later (and you will need to at some point, you can count on it), remembering what each wire is hooked to becomes much easier because of these tags.

— MRH Staff



Organized wiring made easy

How many times has a mystery short occurred on your layout and then once you crawled under the layout you realized you couldn't remember what wire went where?

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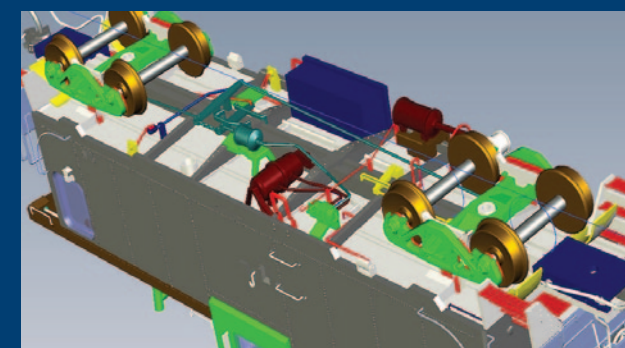
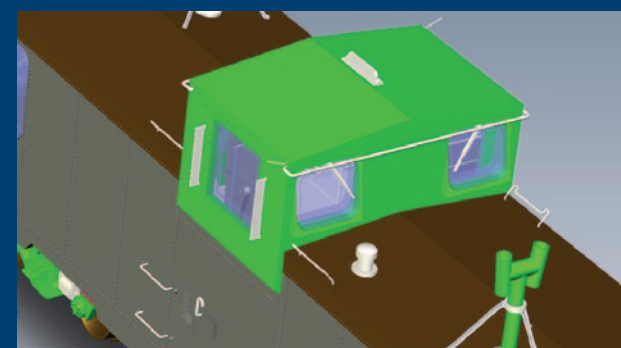
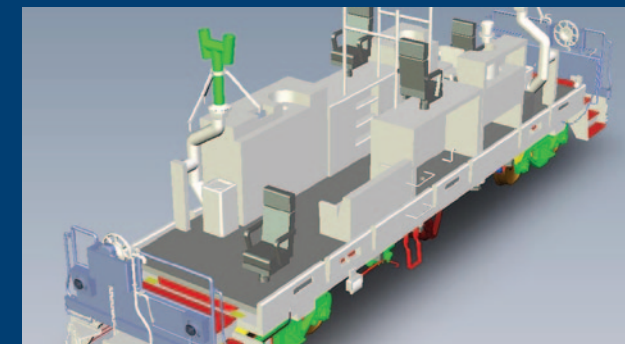
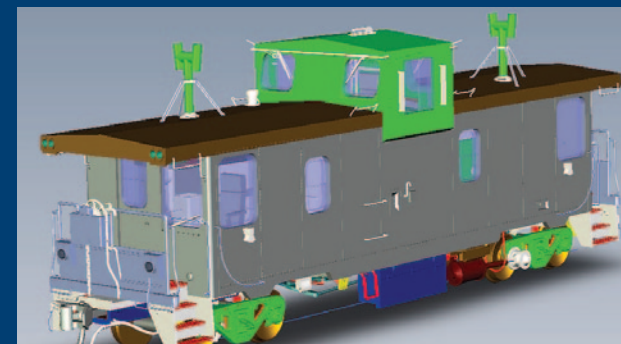


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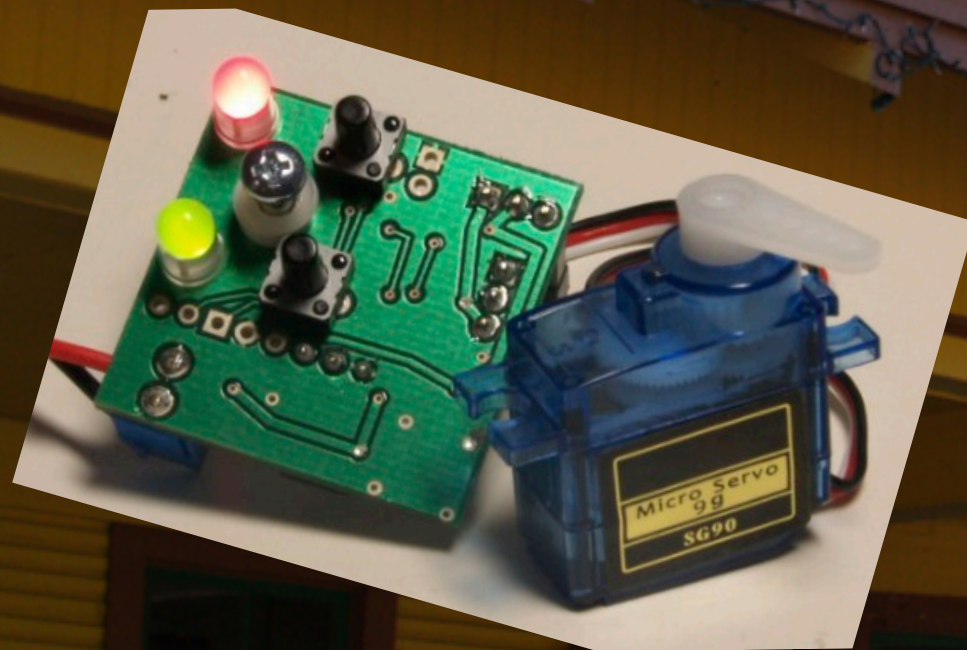
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Coffman Clamps Getting Square Corners!

by Jack Burgess



Many resin freight car kits sold today feature one-piece bodies which greatly simplify their assembly. However, many models are still flat kits – a kit containing a set of flat panels. Some of us still have large stashes of unbuilt flat kits.

It is critical that the sides and ends are square and properly aligned with each other when building a flat kit. That task is greatly simplified by using an Original Right Clamp produced by Coffman Graphic Solutions. Although also available from Micro-Mark, I bought mine directly from Coffman (www.coffmaneng.com).

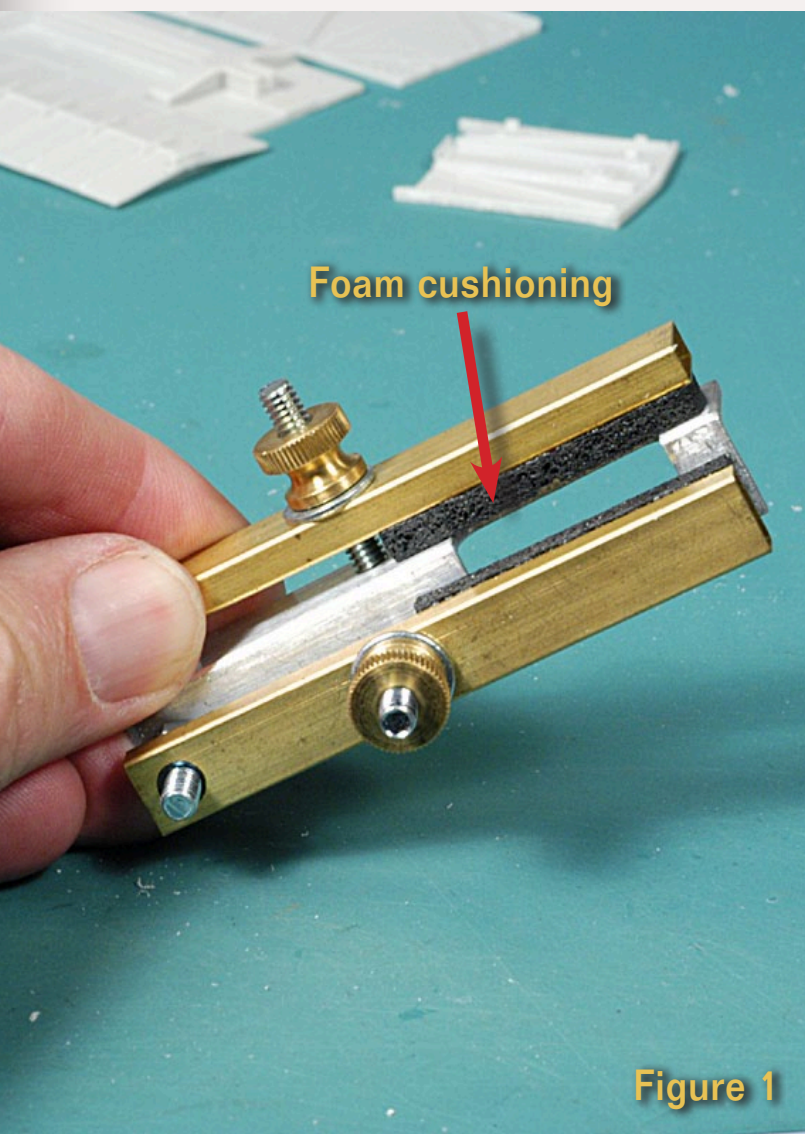


Figure 1

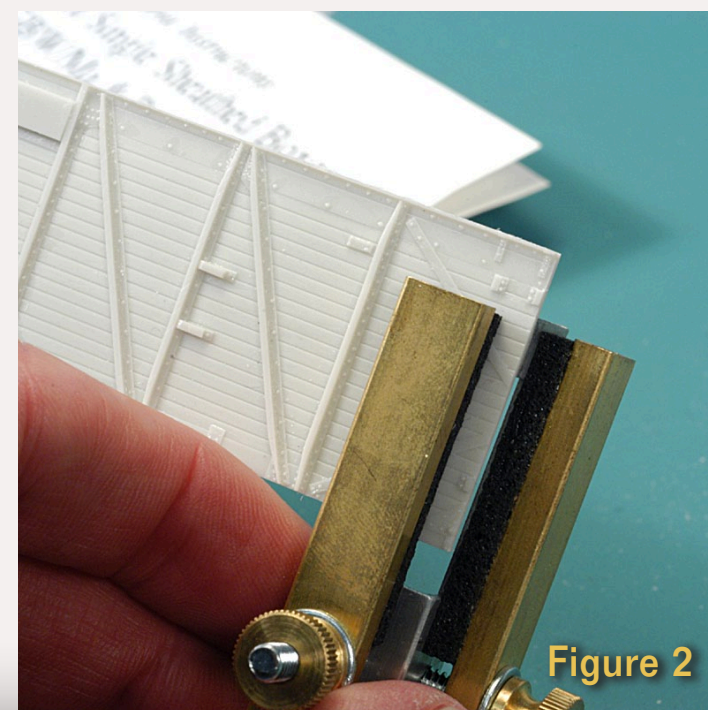


Figure 2

Figure 1: The Original Right Clamp is perfect for resin freight car assembly. A piece of aluminum angle ensures 90° corners while foam on the clamp faces protects fragile details when clamping parts together. Coffman makes longer right clamps for structures.

Figure 2: To use the clamp, first position the clamp with the edge of the resin side of the car about even with the face of the opposite clamp.

Figure 3: Then lightly clamp the end in place. Both clamps should be tight enough to hold the pieces in place, but loose enough so the parts can be wiggled into final position.

Figure 4: Move the side and end pieces until they are in proper alignment to each other and the joint is tight without a gap. Then tighten the clamps as needed.

Figure 5: This is what the inside of the clamp looks like with the parts in proper alignment.

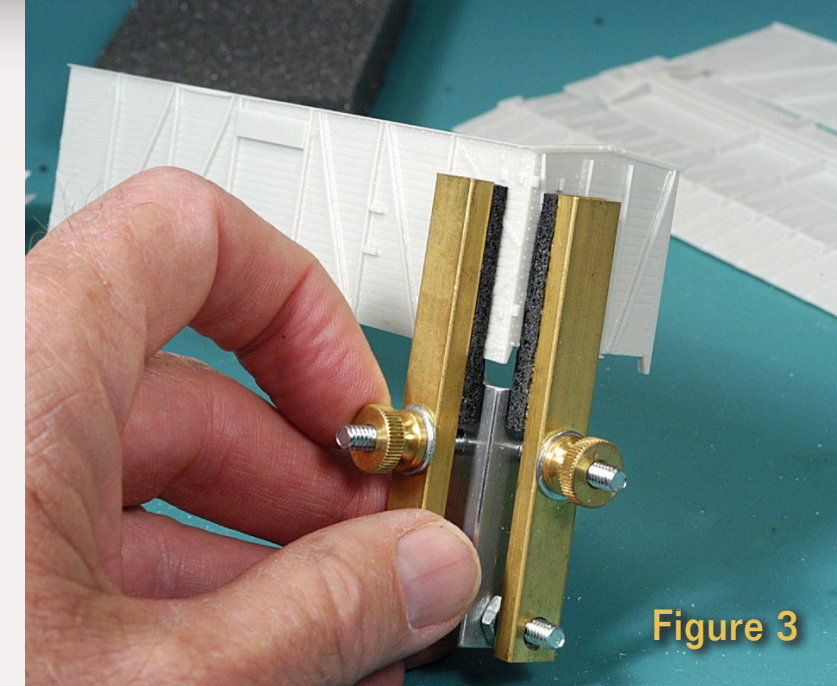


Figure 3

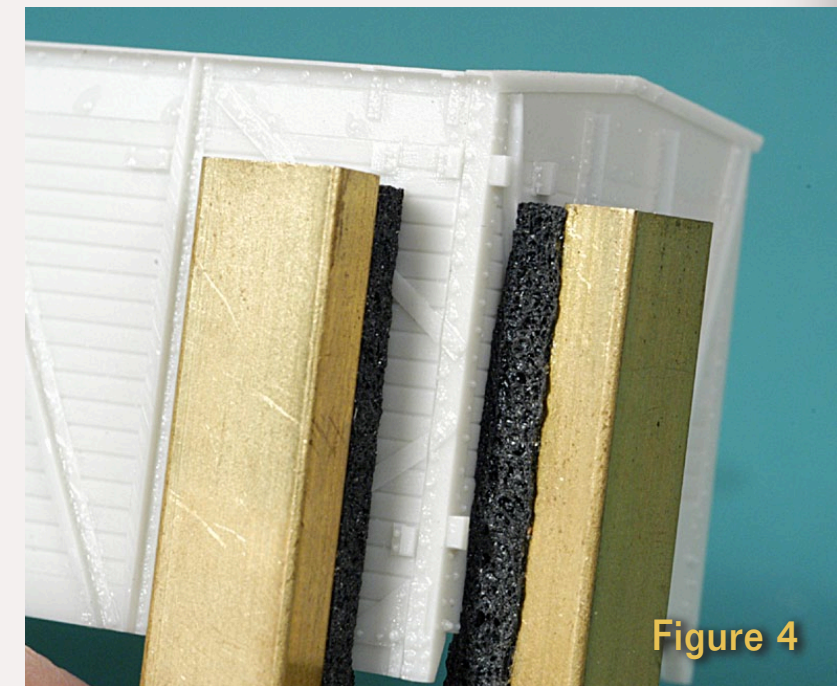


Figure 4

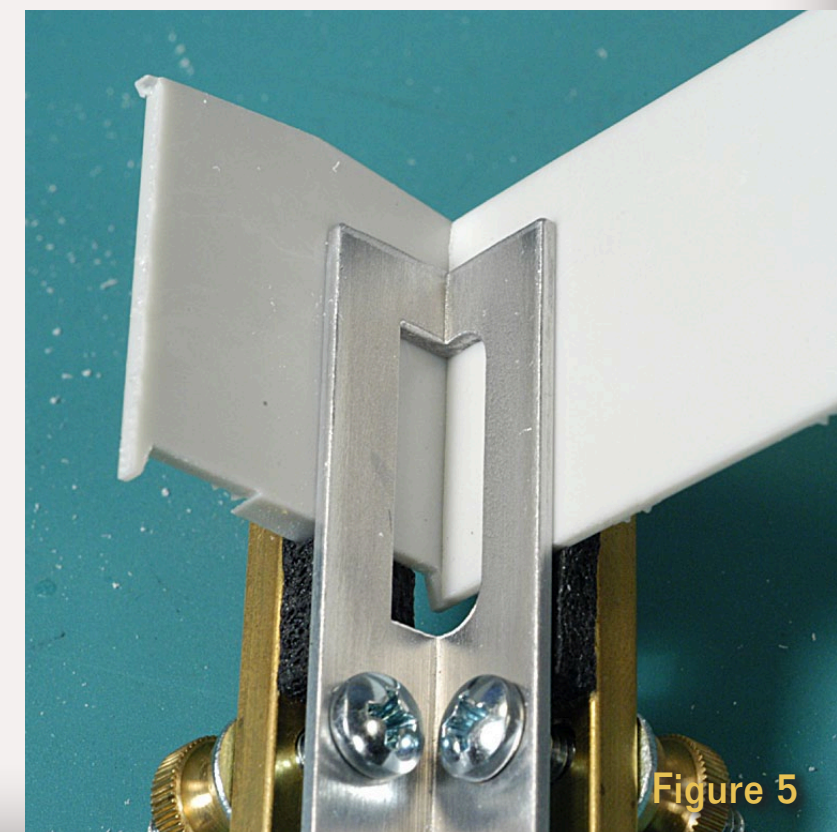


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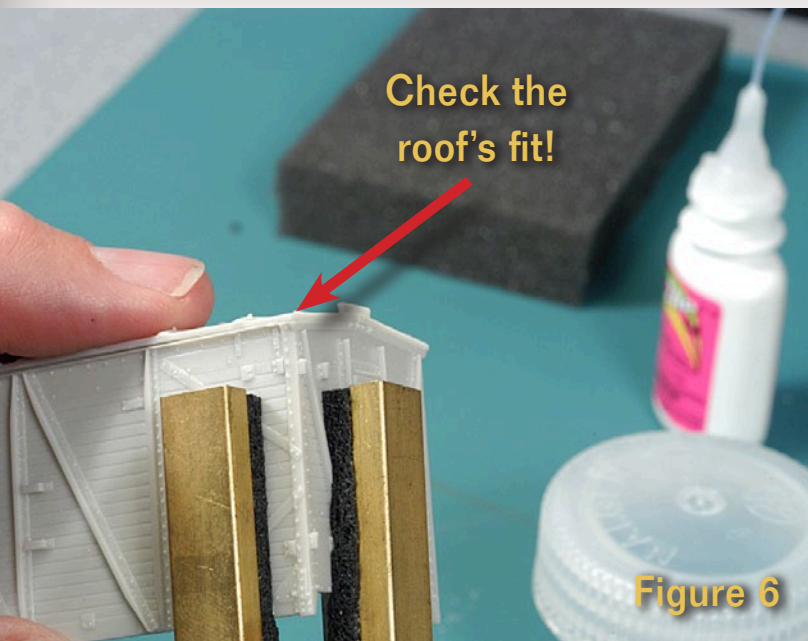


Figure 6

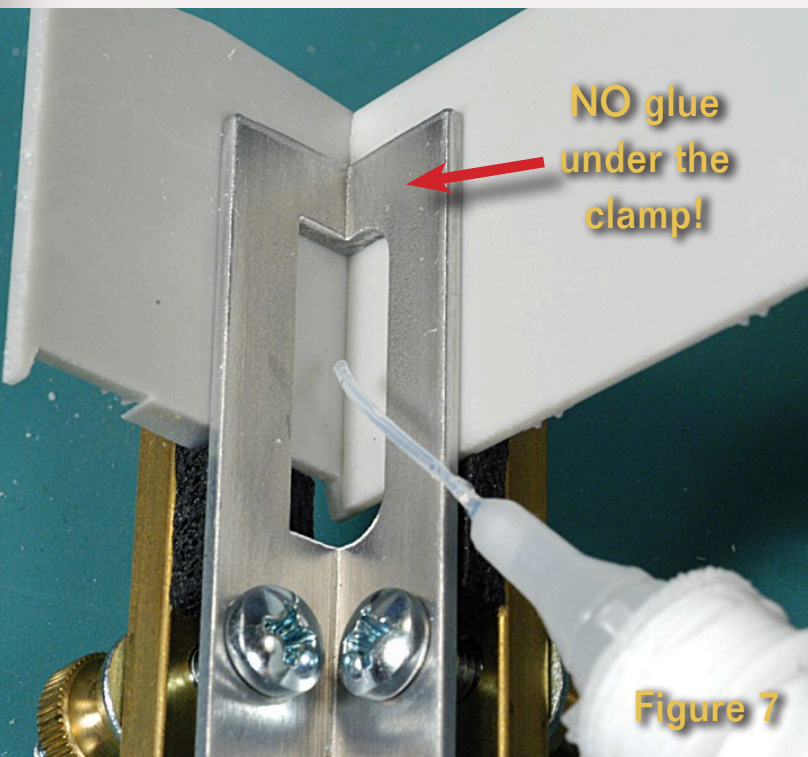


Figure 7

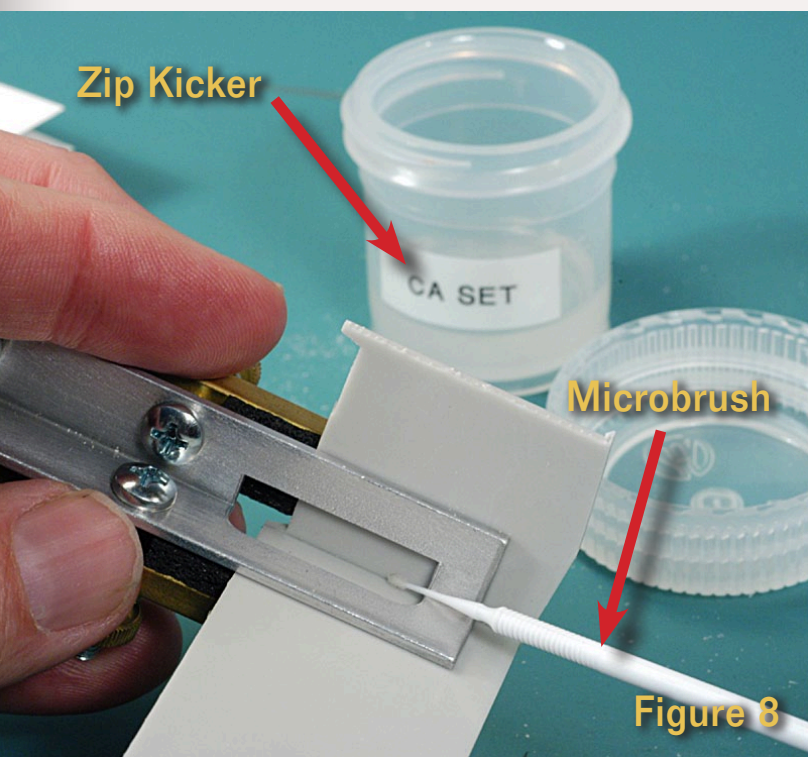


Figure 8

Figure 6: Test fit the roof before bonding the side and end together to make sure the parts are in correct alignment. With some kits, the tops of the pieces are even while other kits are designed with the bottoms even.

Figure 7: Apply cyanoacrylate glue in the space between the clamps. Hold the assembly level or slightly "downhill" to eliminate migration of the glue under the clamp. I use a super thin cyanoacrylate marketed under the Zap brand name from Pacer Industries which includes a Teflon tube making it easy to apply the glue directly to the joint.

Figure 8: I use a small jar to hold a little cyanoacrylate accelerator such as Zip Kicker, also sold under the Zap brand name. Accelerators are universal and will work with any brand of cyanoacrylate. The accelerator instantly sets the cyanoacrylate, keeping the glue from migrating. I apply the accelerator to the unset cyanoacrylate with a Microbrush – available at hobby shops or through [Micro-Mark](#). A single brush will last for several kits. Dip the brush in the accelerator and quickly run it the length of the joint so that the brush isn't glued to the joint. As soon as the glue dries, unclamp the parts and finish the joint by applying glue to the area that was behind the clamp.



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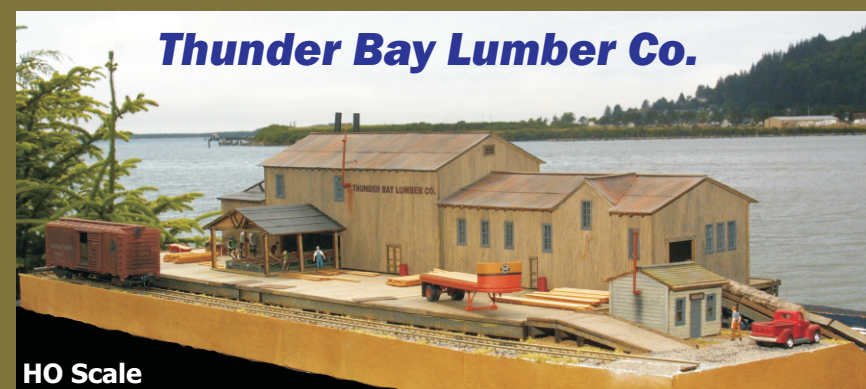
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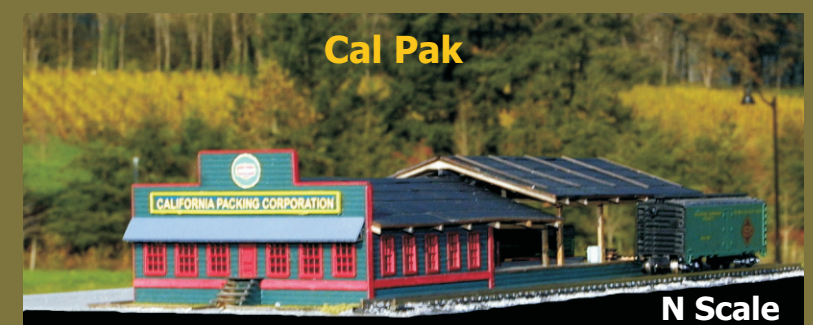
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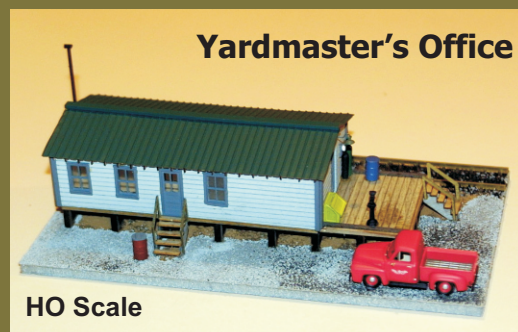
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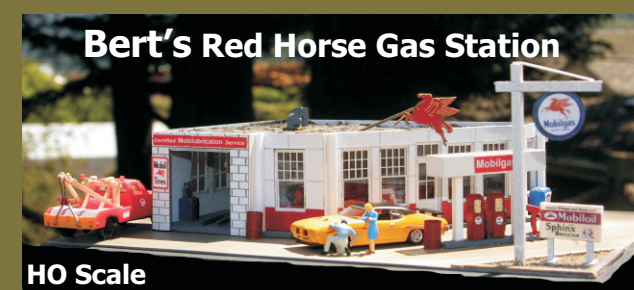
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Kermit Paul's Lone Pine & Tonopah

The Lone Pine and Tonopah Railroad is an HO scale, freelanced railroad that reflects Kermit Paul's major interests—animation, lighting, and control systems. Animation is everywhere – from dancers and a flickering juke box inside the USO building and moving vehicles on Main Street, to functional cranes loading scrap metal at Lone Pine and logs at Camp 12. Not only are there theater chase lights and interior lighting for the buildings, but also dramatic nighttime lighting effects.

Dispatching during operating sessions is done from an authentic Western Pacific Railroad CTC machine which controls the fully-functional trackside signals. Both locomotives and rolling stock are detected via Op-Detection circuits.

Article and photos by Jack Burgess unless otherwise noted.

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Reader Feedback
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While many modelers assemble kits on a small work bench, Kermit's 20'x20' workshop looks more like a small version of the MythBusters' M5 shop on the Discovery television series. Among the projects are a pair of G scale boxcars with working automatic couplers triggered by a laser pointer and a working scale model of a log unloading facility.

The center of Kermit's shop holds a 4-axis CNC (Computer Numerically Controlled) milling machine and a 12"x24" laser cutter.

An adjacent room holds a 3-D laser scanner. Place something (such as a large-scale model) in the scanner, and a pair of laser beams record a 3-D image that can be passed to the CNC machine to make an exact duplicate or one of a different scale.

Kermit's railroad is not being built as a prototype-oriented layout—instead he uses it to work on the kind of challenges he enjoys. It is deceptively large and spacious, accommodating a 40-person bus tour plus operators. The layout is both fun and impressive.

Jack: When did you start your current layout?

Kermit: When I bought my home in 1972, I began an earlier version of this layout in what was then a large two-car garage, roughly 20'x20', where it remained until 1994. That is when

I had the current basement dug out underneath the house. I expanded the former layout into a larger space but followed the same basic track plan. The new basement is about 27'x44', not counting the adjacent garage area where the CTC machine and a staging yard are located.

Jack: Explain how you went from a two-story California house with an

attached garage but no basement to a house with a basement and a depressed garage/layout entry area.

Kermit: Technically, it wasn't that difficult. Fortunately, the house had a concrete perimeter foundation and pier system which supported the wood base of the building, instead of a concrete slab floor. Basically, the contractor slipped seven temporary

Figure 2: The Lone Pine Union Station was kitbashed from a Walthers "Bailey Savings & Loan" building with the design loosely based on Fillmore station on Frank Ellison's Delta Lines. A moving sign on the building displays the time, temperature, and current news events.



Figure 2



Figure 3

steel beams under the house to support it while basement construction was underway; then he proceeded with the excavation. Fortunately, the soil here is a fairly hard, sandstone-like material which didn't require much support while the basement was being excavated. Once the digging was completed, he built concrete block walls and poured the floor slab.

Then he inserted a set of permanent steel beams to support the home. The former layout was transported into the new basement in pieces. He finished by removing the slab floor in the old garage. The project took a year to complete, including moving the layout.

Jack: Did you draw up your layout plans in advance or did you just conceptualize it?

Kermit: The current layout plan was only conceptualized. You need to go back to the former layout in the garage, which was in a space one-third the floor area of the basement. I was quite happy with the former track plan when I moved the layout into the new basement although I wanted more aisle space and more distance between towns and sidings. So I retained the

Figure 3: A cab forward rolls through the town of Benton with a troop train in tow. The cars are factory-painted Precision Scale imports and include one kitchen car and five troop sleepers.

former track plan and the CTC machine which was already set up for that track plan. Moving into the new layout room

was simply a matter of moving the old stations and sidings from the former layout into positions in the new room that provided the same basic track plan. I simply connected them with new “spline and spacer” roadbed and track to create greater distances between stations. So it didn’t require an elaborate plan although I did make a rough one. I never went to the effort of making an elaborate track plan for either the current or former layouts.

The former layout wasn’t high density so I had lots of room and could free-wheel it as I went.

Jack: How long is your mainline?

Kermit: That is a very good question but I never measured it! I’ve never had the curiosity to find out. The track plan is loop to loop, single-track with four passing sidings. Physically, the two reverse loops are stacked one above the other. Each has a spur to a shared

Figure 4: The Republic Pictures back lot is shoehorned into an area off Main Street. On the left is the city scene where cameramen on booms are filming a “cops and robbers” chase scene. The cars here are animated like others on the layout. To the right is a western set complete with cowboys. The buildings are Hallmark Christmas ornaments which have open backs, typical of movie prop buildings. Barely visible over the fence and next to the gas station is the Batmobile, parked and ready for the next take.



Figure 5: The Greyhound bus station is a modified Spectrum Bus Station. The Greyhound sign on the roof and the Automat Cafeteria sign were laser-cut from plastic. The station is near skid row, as evidenced by the massage parlor behind the bus station. A couple of sailors are having second thoughts about entering the establishment while the police paddy wagon is parked nearby.

interchange yard in the adjacent room. The return to the mainline uses a reverted loop.

Jack: Obviously, you are modeling the World War II era. Are you modeling a particular year?

Kermit: No. Actually I’m fairly liberal there, it is just some period during World War II. The flashing announcement sign on the main station is describing D-Day and the fall of Rome, which would have been June 1944. But I’m not as particular as some people I know.

Jack: So, what drew you to that era?

Kermit: I have always been a history buff and interested in the history of that time period. Everything that went on at that time was important to civilization, and so I chose that era and I’ve enjoyed it ever since.

Jack: What type of track and switches are you using?

Kermit: When I built the original layout beginning in 1972, I used Shinohara Code 70 track and Shinohara Code 70 switches, both 4s and 6s. I continued

with that although some of the extension (built beginning in 1994) was probably Micro Engineering. All the railroad uses Code 70 track and I've had no real trouble with that. But I don't aggressively use abrasives (such as track erasers) to clean the track—I think that would be rough on Code 70. I tend to use the Centerline cars with the cloth-covered rollers. Rarely do I need to use track cleaning chemicals

before our monthly operating sessions. We run the Centerline cars with dry cleaners around and that seems to do a satisfactory job of cleaning the rail. Some of this track has been in place since 1972 and I have found no evidence of wear on the railheads. So it has done very well.

Jack: What is your favorite aspect of the hobby now?

Kermit: I think solving challenges in terms of control, animation, and lighting—things that you can't do by simply buying a box. I like things that require some engineering and some imagination. Being a mechanical and electrical engineer, one wants to see how those talents can be put toward applications in our hobby.

Jack: Tell me about your control system.

Kermit: The control system is technically called Progressive Cab Control. I began looking at control systems in the late 1960s and studying the question of how to control multiple trains on a railroad. At that time I was a member of the Sacramento Model Railroad Club and the late Linn Westcott [editor of *Model Railroader* at the time] had written some magazine articles in the 1950s on route cab control. In one issue, he closed by saying that, if the movement of the route cab selector switch could be automatically advanced by some means that he did not describe, we would have a system which he called "progressive cab control". That meant a system where the connection from the cab or throttles to the various blocks occupied by the trains was done by some automatic mechanism and the engineer does not have to do it using manual means, such as toggle switches, which had been the way in the past.

Jack: First, explain route cab control.

Kermit: I first saw the method implemented at the East Bay Club in Oakland, CA (now the Golden State Model Railroad Club in Point

Continued on page 42 ...

Figure 6: LP&T Climax No. 5 makes its way up the branchline to Camp 15 to pick up some loaded flat cars to take to the mill where the logs will be dumped in the pond.



Figure 6

Kermit Paul's Lone Pine & Tonopah



Kermit Paul got started in the hobby with an S gauge American Flyer train set while he was in high school. He switched to HO while in college. After graduating from UC Berkeley with a degree in mechanical engineering, he spent a couple of years testing rockets, and then seven years with the California Department of Water Resources on the California Aqueduct project. The rest of his professional career was with Pacific Gas and Electric Company working on hydroelectric projects. During that time, he became a registered electrical engineer in addition to being a registered mechanical engineer. Kermit retired in 1994, but continues to serve as a consulting engineer on the design of hydroelectric projects, especially pumped-storage hydro-power projects. He also serves on a number of national and international dam project review committees.

He currently resides in the San Francisco bay area.

Layout Statistics

Era: World War II
 Locale: Eastern Sierra Nevadas
 Style: Freelance
 Configuration: Single deck
 Scale: HO
 Trackplan: Loop to loop with

branchline and separate staging.
 Loops stacked one above the other.
 Size: 44' x 27'
 Minimum radius: 36"
 Track: Shinohara and ME code 70 flex track
 Turnouts: Shinohara #4 and #8
 Control: Progressive cab control

Elevations: 46" to 56"
 Roadbed: 3 wood splines with spacers in between topped with cork.
 Lighting valance: Short curtains from JC Penney.
 Staging: 10 tracks on sector plate.

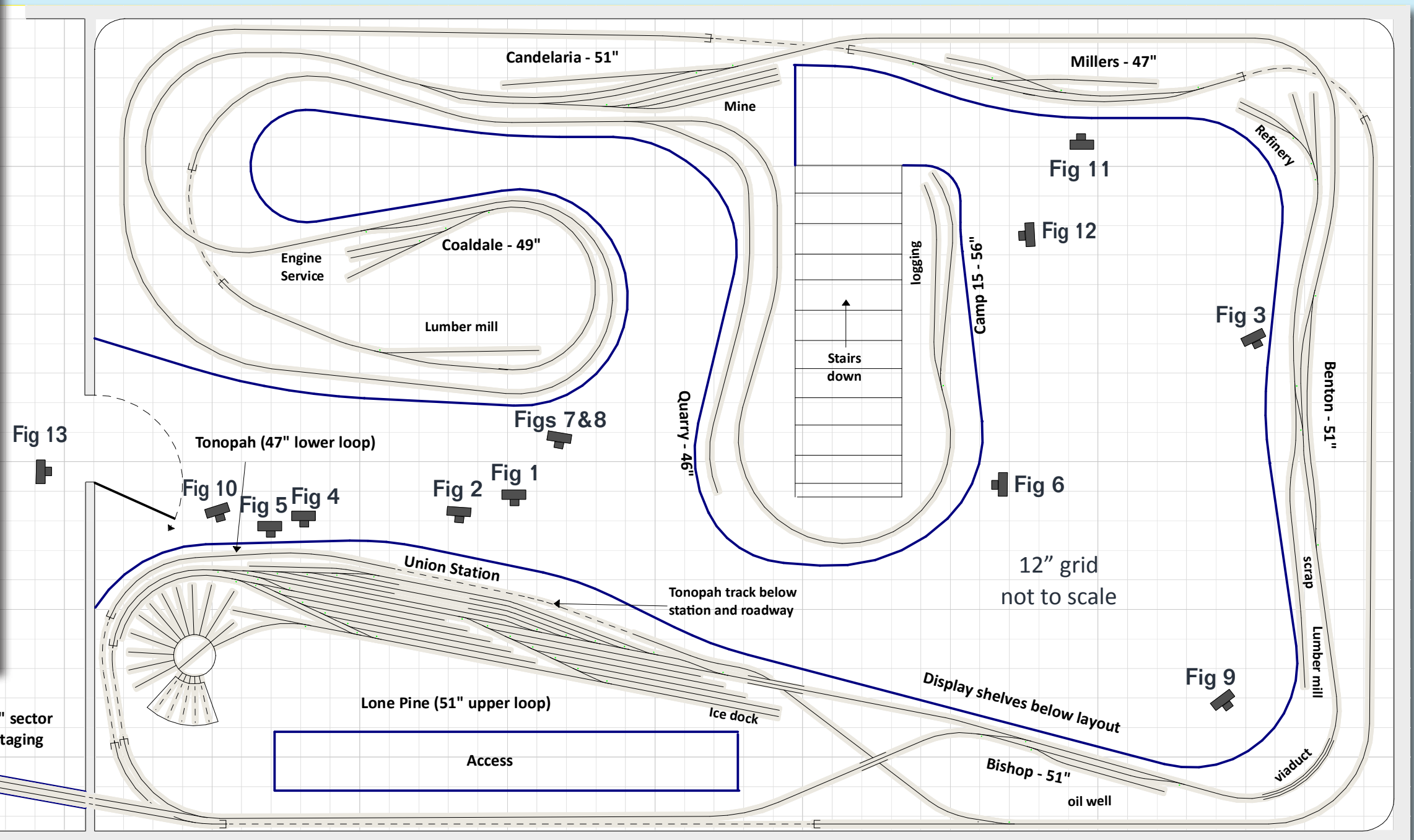




Figure 7

Figure 7: Lone Pine fills a space nearly 20 feet long and is dominated by a pair of art deco skyscrapers. Union Station is up front near the city center. Two animated P-51 fighter planes patrol the sky to the right. On the left King Kong keeps some biplanes at bay on another tall skyscraper.

... Continued from page 40

Richmond, CA) back in the 1960s. Essentially the engineer used a rotary selector switch rather than toggle switches or push buttons to connect his cab to various blocks as his train went around the layout. Let's say that he was going eastbound and was in Block A, he would set the switch to Block A which would connect him to

that block. Before he left Block A, he would advance the rotary selector switch one position which would keep him connected to Block A, but also connect him to Block B. When he was in Block B and turned the switch one more position, he dropped Block A and connected to Block C, and so forth. So it was essentially a rotary type block selector which Linn Westcott thought

was a more convenient way to do things. Linn incorporated cab signals and a simple detection system to follow the train. It was a fairly interesting system. The East Bay Club used it and they seemed happy with it when I was going to college back in the late 1950s and early 1960s.

Jack: So you took Linn up on his challenge to automate it?

Kermit: Yes, Linn had the idea that, if it could be done automatically, we would have a progressive cab control system. There were no articles on how to do that, and Linn didn't give any hints on how to do it. So, I took on the challenge and by 1968 I had developed a pilot model using all relays and some logic to do that since this was before computers. By the mid-1970s,

Figure 8: As darkness falls, the city glows with hundreds of street and building lights, chase lights, theater marquees, and flood lights.

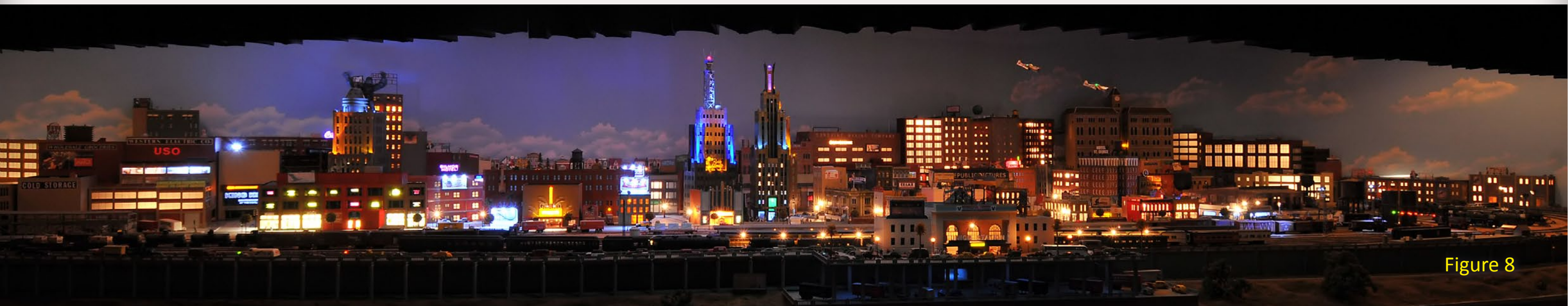


Figure 8

Figure 9: An Electro-Motive A-B demonstrator pulls a passenger train across the viaduct between Bishop and Benton. The passenger cars were scratchbuilt using a CNC machine. While the river under the viaduct seems to continue toward the mountains, there is actually a second track hidden behind the bridge. Three mirrors embedded into the arches of the bridge reflect the foreground to provide the illusion of depth, while the hillside in the left foreground blocks the mirrors from reflecting the rest of the layout room.



Figure 9

I had developed a modular version. At the same time, I was evaluating the so-called command control systems that were entering the market. For example, the first one was GE's Astrac system which came out sometime around 1965, followed in 1968 or so by a very early 16-channel digital system. Allen Keller (of Keller Engineering) later released his Onboard control system, which was tone-based using telephone-type communications.

So, these systems were out there and I was looking at both the command control approach and the progressive approach. I had a Pacific Fast Mail (PFM) sound system that I liked and was very elaborate. In evaluating these two systems, I thought that the progressive cab control was more appealing in terms of flexibility and the ability

to use all kinds of sound systems. So that was the path I chose. For a time, my system was available commercially which I called Auto-Cab. [The author installed Auto-Cab on his layout back in the early 1980s and used it for a long time before switching to DCC when Soundtraxx decoders first became available.]

We supplied a very large system to an Australian client for an O scale layout, which included 20 cabs with 10 amps

per cab and a total of 120 blocks. It included an automatic feature where one could send trains out of the yard at a set speed, essentially putting that cab into an "automatic pilot" mode. The train would obey the track signals by applying the brakes on red signals and releasing the brakes on getting a green signal. The owner could run 20 trains fully automatically on this layout while he sipped his wine and watched the trains run!

The Auto-Cab system that I built in 1972 to run my old layout is still running the new layout. Currently, you can buy progressive cab control systems using Bruce Chubb's C/MRI system and components. It is essentially doing the same thing functionally, although instead of my relays and diode logic, the Chubb-type system uses a PC. But it still uses relays to make the connections between the cabs and blocks of track.



Figure 10

Figure 10: House tracks radiate from the turntable which also serves the roundhouse. The turntable is driven by a stepper motor and uses pneumatic pistons to lock the bridge position.

routes a DCC cab or throttle through the progressive network, so that you would have one DCC booster per-train rather than per-block. This might be a more economically-attractive and viable system overall. It also gives the client the opportunity to use DC, DCC, or anything else that may come along. Although there have been warnings in some literature about using DC and DCC on the same layout, articles written by Dr. Bruce Chubb, the late Paul Mallery, and others suggest that it is quite feasible. I've experimented with my layout and I find that I can run DC and DCC simultaneously. One does need to take precautions to avoid shorts at junctions between one block and another so that the DCC signal doesn't damage the DC cab or vice-versa. I have found ways to do that so the two can live together harmoniously.

Jack: Have you had help building your layout or did you do everything yourself?

Kermit: This layout was built primarily by myself. I did get some help on some of the scenery by **Clayton Barry**, who has written many articles for N-Scale magazine. **Paul Newitt**, author of *A Beginner's Guide to Creative Effects for Your Model Railroad* for which Kermit was the technical advisor, provided a

Jack: Do you think there are still some advantages to progressive cab control over DCC?

Kermit: I think there are some applications. Certainly one advantage is that one can use any type of throttle that one chooses. If you go back to the old PFM sound system, I think arguably it is still the finest sound system for steam engines ever built and, in some ways, superior to some of the digital systems. The PFM system let

one create, with potentiometers on a control panel, things such as whistle effects and exhaust cut-off effects. It was much more convenient to do that with knobs than in the digital mode, where you push a button and you get a recording that is synthesized. You really don't get the control needed to "play" a whistle as you can with PFM.

So, yes, I think there still are some applications for progressive cab control. For example, I'll be doing a control

system for a client's new O scale railroad where he wants to run long trains with multiple units, probably using as many as 10 amps per train over many, many blocks. To do that entirely in DCC, one might need to have a 10-amp booster for each train! If you spread that over the railroads, 60 to 100 blocks, you are talking about a lot of boosters – something prohibitively costly and difficult to maintain. For that layout, I'm looking seriously at utilizing a progressive system that

lot of help with detailing the city area's buildings, helping impart the art-deco look of a city in the 1940s.

Jack: Do you have operating sessions on the layout?

Kermit: I typically have a dozen or more people operate monthly. I normally start around 6:00 pm and run until 9:00 or 9:30. Some of the folks drive as much as 2½ hours each way, which means not operating too late. We use a fairly informal waybill system—it is not computer-based. Essentially it uses on-car waybills similar to those of John Allen or Whit Towers where the information is carried on a magnetic, two-sided disc on the car. It provides meaningful switching and routing of traffic without having to prepare switch lists, use computers, or use much paperwork.

Jack: Do you have any major projects in the works?

Kermit: I want to do considerably more work on the city detailing, adding different animation and lighting effects. I'm also spending a fair amount of time doing work on client layouts. Although I don't actually offer my services as a builder, **Jack Verducci**, who does build railroads commercially (primarily G scale), and others have asked for help occasionally. On such projects I serve as a subcontractor.

One very interesting project I worked on recently is in New York state. This 2,000 square-foot layout models the Lackawanna Railroad in 1/32 scale (www.lackawannarailroad.com). I also did some work on the N scale layout

at the Disney Family Museum in San Francisco last year. Each is in a different scale and each has its own challenges which are fun to solve and engineer.

Jack: You've been doing animation for a long time. Have you changed techniques over the years or rebuilt some of them as new products become available?

Kermit: Yes, for animation, I obviously closely watch what appears on the surplus market and follow companies that buy manufacturers' overruns. I'm always looking for things like miniature gear motors and chains and sprockets. Very interesting things show up which can be put to practical use for animation.

One of the interesting things I've added to my layout are BASIC Stamp microprocessors from Parallax (www.parallax.com). I use them to control things like the Fourth of July fireworks show and storm sequence. Those little processors let me do a lot of control, animation, and sequencing.

Another product I've added to the layout in recent years is a device called the Dream Player by a company called PRICOM (www.pricom.com/Trains/DreamPlayer.shtml). It's a solid-state device which allows one to record four audio tracks on SD cards, like those in cameras. Those tracks play back through speakers placed around the layout. It can do more than just playback – it can switch output transistors on and off to control other things while a track is playing. One can use a number of Dream Players to put on an entire light and animation show! For example, I can push a button which initiates the lowering of



Video playback problems? [Click here ...](#)

the room lights to create a sunset effect. The lights go down all the way and fireworks automatically start, followed by a thunder and lightning storm. When that ends, daylight returns automatically.

Jack: How do you trigger the events?

Kermit: The four audio tracks are triggered by four contact closures—either a button, a sensor, track occupation, or even a motion sensor. You can configure the Dream Player to play one track and then another, or all of them in sequence, or even to trigger another Dream Player. **Jim Wells** of [FantaSonics Engineering](#) created the sound tracks for me.

Jack: Tell me about your World War II displays.

Continued on page 47 ...

Figure 11 (next page): Vehicles are stopped to wait for an approaching train at the grade crossing to the National Biscuit Company at Millers. Several buses with MPs stationed next to them are parked on the far side of the tracks. They will transport disembarking soldiers to a nearby training camp. The buses were scratch built with the roofs milled on a CNC machine and the sides laser-cut from green plastic. After the sides were painted, they were repositioned in the laser cutter which was then used to remove just enough of the paint to allow the green plastic to show through, creating the lettering. Kermit feels this is a much simpler approach than making decals.



Figure 11



Figure 12

Figure 12: Camp 15 at the end of the branch line - *Charlie Comstock photo*

Figure 13: Kermit standing next to the layout entry - *Charlie Comstock photo*

... Continued from page 45

Kermit: Over the years, I've acquired a fairly extensive collection of artifacts, memorabilia, and papers from the WW II era. Visitors in the waiting area outside the layout room see a number of newspapers, magazines, posters, and other interesting paper material of that era including a working 1941 pinball machine.

A DVD player shows Walt Disney cartoons made during the War. Shelves in the layout room beneath the layout hold a large collection of various military artifacts from this era. All of that helps put the viewer in the frame of mind for the era that I am modeling.

Jack: Kermit, thanks for having me over to visit the LP&T Railroad.

Kermit: You're welcome!

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▶ **Reader Feedback** 
 (click here)



Figure 13



The Scenery Scene

Build a Billboard A laser kit made it easy ...

by Charlie Comstock

 **Reader Feedback**
(click here) 

I was in my LHS (local hobby shop) a few weeks ago when my eyes fell upon a [Blair Line](#) billboard kit (figure 2). This is an older style billboard for that bastion of American transportation, Mack Trucks. I left the store with the kit in my hand. I decided to see if I could assemble the kit in an evening (the answer was yes – even while shooting photos!)

I started by painting the parts. I did most of the painting with the parts still in their ‘carrier’ which made them easier to handle. I airbrushed the ‘TRUCKS’ lettering white using Golden artists acrylic paint (figure 3). Then I mixed black and white to make a gray and airbrushed the support structure pieces (figures 4). I used tweezers to hold the supports while I airbrushed their edges (figure 5). A double-action airbrush gave me very fine control while painting these areas.

I used an old bottle of Polly S (that’s old!) Amtrak Blue for the oval and some artist’s tube acrylic red for the ‘Mack’ (figure 6). I brush-painted these parts. The painted pieces and the selection of paints I used are shown in figure 7.



Figure 1



Figure 2



Figure 3



Figure 4

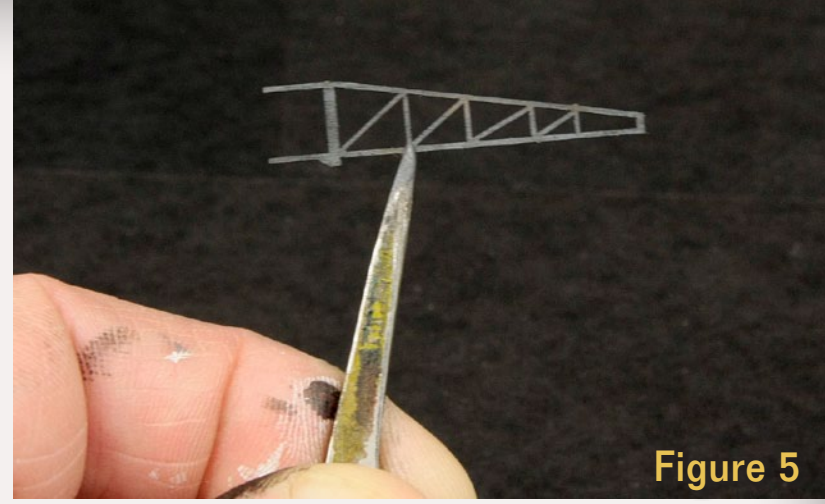


Figure 5

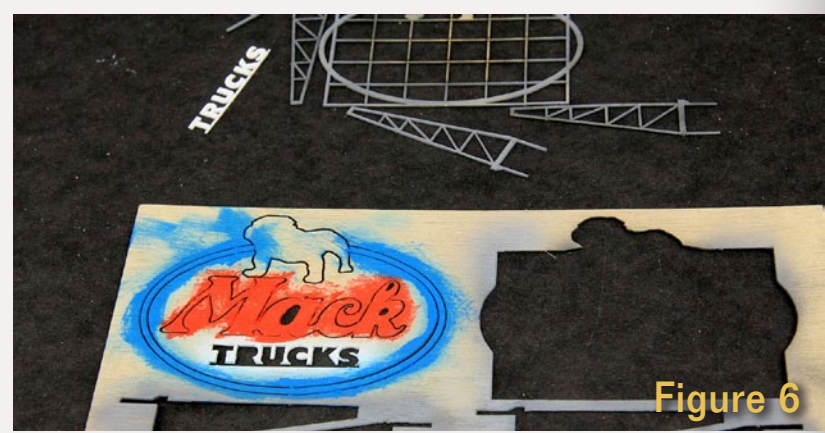


Figure 6



Figure 7

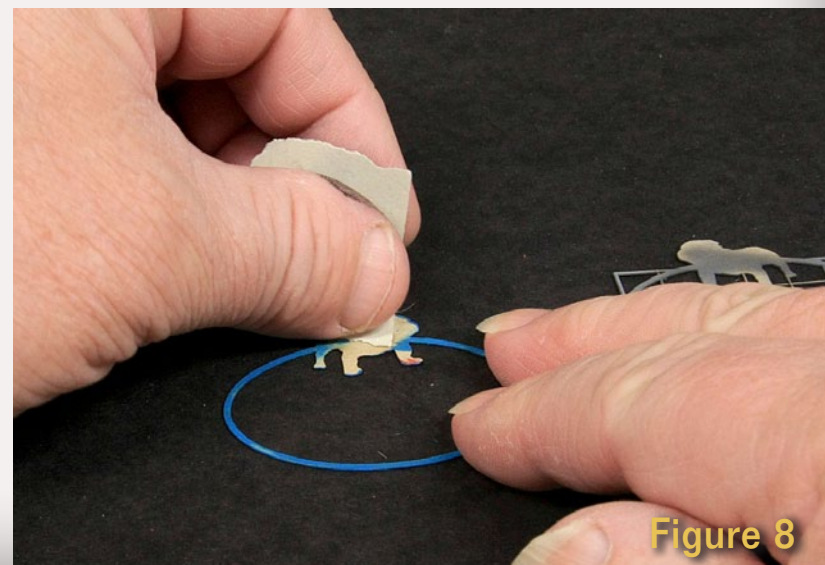


Figure 8

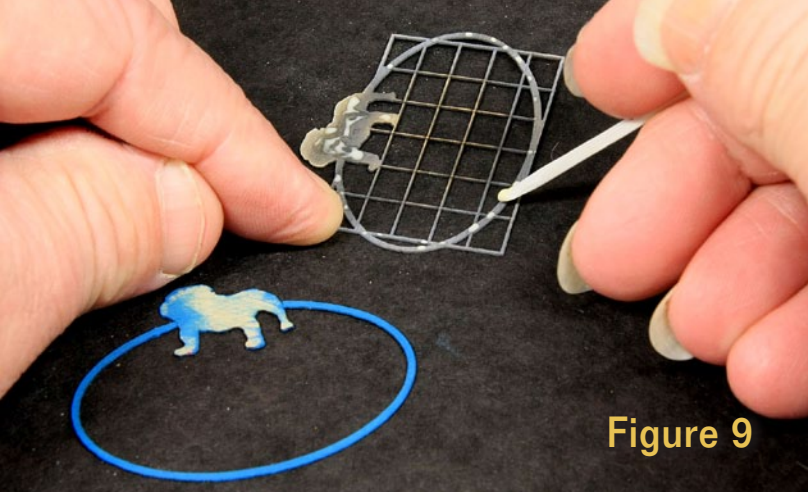


Figure 9



Figure 10



Figure 11

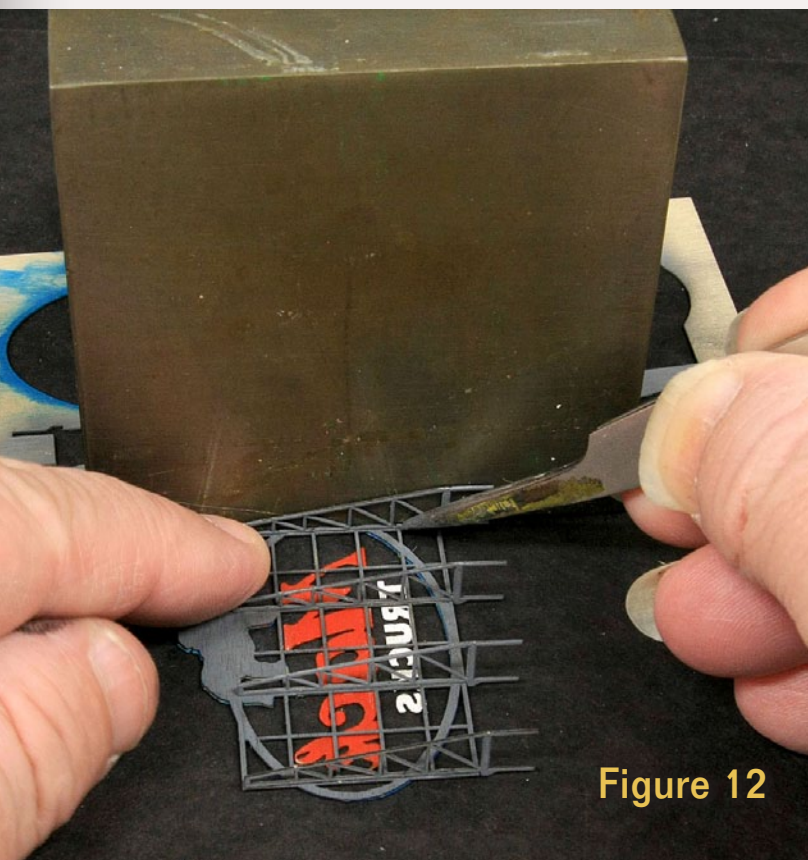


Figure 12

I was careful not to get globs of paint on the outline of the bulldog. However, it did require some cleanup. I sanded it lightly using some 400 grit emery paper (figure 8).

The next step was assembly. The instructions recommend yellow glue and that's what I used, applying it with a piece of styrene I carved to a point. I put little drops of glue around the oval on the grid (figure 9) then pressed the ring onto it. I put the lettering temporarily in place to gauge where the glue should go then repeated the little drops of glue process to attach the lettering to the support grid (figure 10).

I used a sanding stick to remove burrs from the four support towers (figure 11) before applying glue to the edge holding the billboard. I used a steel right-angle jig to hold the support towers perpendicular to the billboard's support grid while I bedded down the parts in the glue (figure 12). Then I peeled the self-stick bulldog image off its backing paper and set it on the bulldog cutout (figure 13).

Finally I dipped the tips of the support tower legs in Hobby-Tac and set it on my layout atop the Mill Bend cold storage building. Done!



Figure 13

LASER MODELING



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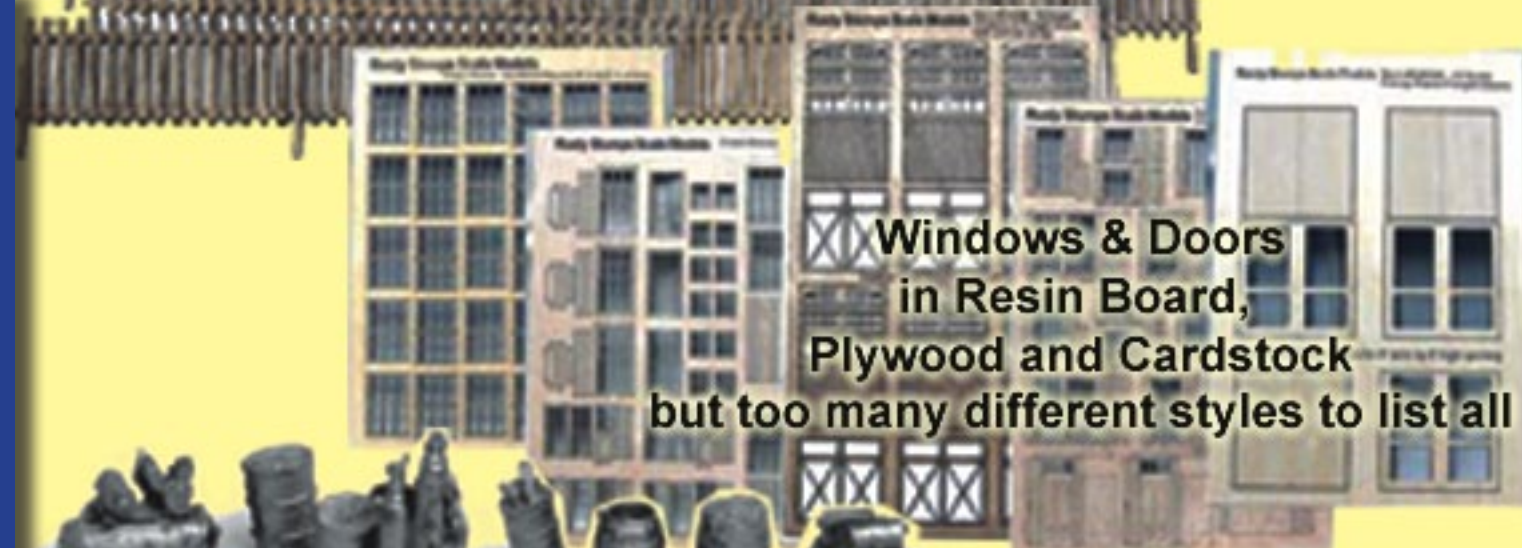
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Prototype Scene Modeling Notes: Signals & Remote Switches at West Goffs on the BNSF

We take a look at how the real railroad does it, so you can model it ...

On a vacation/railfan trip, I came across something I had not thought of taking pictures of before. Just outside of Goffs, CA,



on the former U.S. Route 66 (now National Trails Highway), there's a long passing siding. CP West Goffs is at the western end of this siding. West

— by Joshua Baakko
photos by the author

Goffs has an array of signal equipment and a remote switch.

BNSF keeps this equipment in tip top condition. If it were to fail they

would lose a siding on one of the busiest main lines in their system. The site contains two steel cabinets. One contains a propane-fired back up generator. To the east of the shacks is a modern cantilever signal bridge, similar to the prototype for the BLMA Models version. To the west there are two signals and the remote switch.



Figure 1. Eastbound train view, of the back of the cantilever signal bridge.

Modeling this set-up in HO scale would require a few things. The cantilever signal can be modeled with the BLMA Models Modern Cantilever Signal Bridge, part #4030 (www.blmamodels.com). The bridge would require 3 signal heads to replicate the prototype scene here.

The equipment boxes would have to be scratchbuilt as they're far too different from any commercial kits. Simple styrene construction should be fine, as they're smooth metal. Paint with Testor's Silver, or colors from Alcad II and they should look perfect. There are doors to the cabinet, so you may want to take a commercial kit and rebuilt it to suit. Suitable louvers are available from Archer Models. See model-railroad-hobbyist.com/node/2631. If that's too much for you, you can always kitbash a commercial kit from Details West, BLMA, and others.

The generator cabinet has an angled air intake vent facing to the south, an intake vent to the north. All doors have padlocks. The second cabinet is much more plain but also has a number of doors, and all are padlocked. There are no doors on the sides of the cabinets that face the tracks. Both cabinets have six lift rings on the sides, three on the rail side and three on the road side.

The propane tank can be picked up from a number of manufacturers, or scratchbuilt. I myself would pick up one from JL Innovative Design, part numbers 724 through 726 or 730 should work fine. The cabinets and propane tank are protected by concrete jersey barrier; BLMA makes a VERY nice jersey barrier, just paint it white to match (as of mid-2009 the barriers and tanks have been repainted silver). Place one at a 90 degree angle to the tracks to protect the propane tank, and two more parallel to the tracks and the road, on the

road side of the site, opposite from the tracks.

The site also has a fairly tall (approximately 50') radio antenna. This

antenna is mounted on a stand that can be lowered to do any maintenance, and is located to the north east of the cabinets. The jersey



Figure 2. West and south sides of the generator cabinet.



Figure 3. Propane tank and jersey barrier.

barrier just barely protects it. An exact match is not made, however a BLMA antenna can be substituted.

To the south between the cabinets is the West Goffs sign. This is formed in the same way as most Santa Fe signs. It stands on top of a 8-foot-tall, 4x4 post. The lettering is painted on over the metal band holding the sign in place.

The top of the sign post is tapered, and the sign is black lettering on a

white background. The sign is approximately 5 inches tall, by 3 feet long.

If you look closely, you'll see that this installation is at MP 611.62. This is painted on both ends of the non-generator cabinet and on the west end of the generator cabinet. The cabinets also have a black sign with white lettering stating they're located at MP 611.6, these signs are on the outside ends, one to the east on the

non-generator cabinet, and one to the west on the generator cabinet.

At the west end of the siding there are three signal masts. The switch is signaled by a single three-light signal located about 300' before the switch. When heading west you would be using the cantilever signal previously mentioned, or this signal if you're on the siding. Eastbound trains use the two masts in the distance. Both masts

have two signal heads, with 3 lights each. All signal heads have shrouds. BLMA stocks the dual head version and the single head is forthcoming. Tomar and other manufacturers also make 3 light signals.

The remote switch motor detail is available in HO scale from Details West.



Figure 4. West Goffs sign.



Figure 5. Close-up view.



Figure 6. West signals, single signal at the end of the siding.



Figure 7. Eastbound signal mast.

The HO scale model is not operational, not that there is much moving on the prototype. The handle is there for manual override.

this. This is only one of many ways this can be set up, and is by no means the only way. .

 **Reader Feedback**
(click here) 

I hope I've inspired someone to model a signal and switch set-up like

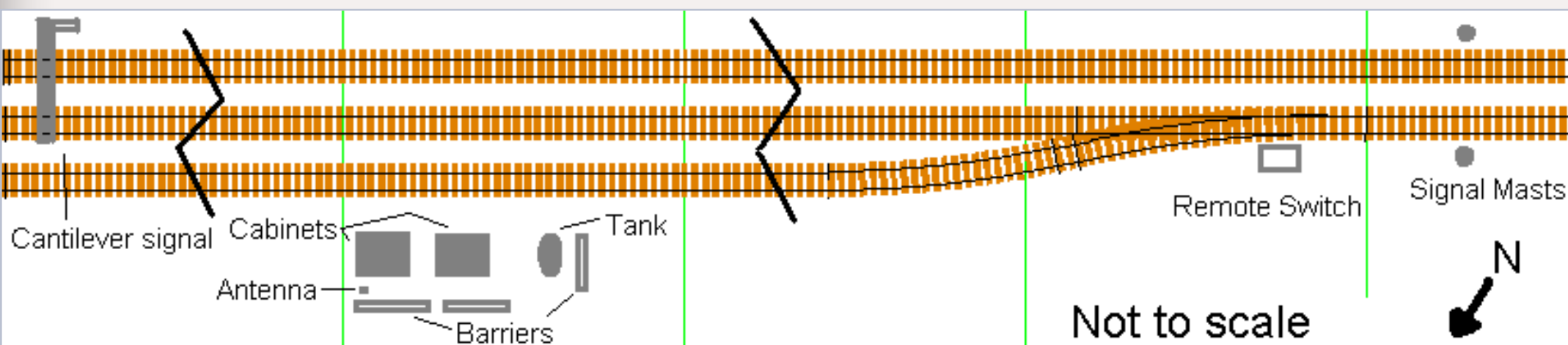
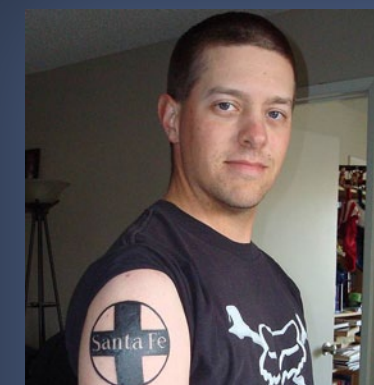


Figure 8. Layout of the site.



Josh Baakko models the BNSF & Union Pacific in the contemporary period, in HO scale. His layout plans are to stick to modern era equipment, with a 5 year "back date" max.

Josh grew up in Hancock MI, in Michigan's Upper Peninsula, thus creating a lasting interest in all things Copper Country railroading related. He particularly likes the Copper Range & Mineral Range railroads, and collects anything relating to Copper Country railroading.

Josh lives in San Diego with his wife, Stacey. He usually can be found at the annual Western Prototype Modelers meet in San Bernardino CA.



Figure 9. West Goffs remote switch.



Figure 10. Overview of the West Goffs site.

Aging Wood with Acrylic Washes

So the challenge was on to age the wood to that perfect gray color. I must admit, I'm still searching, still trying new products and old, time-tested methods. However, I have come across a technique for aging wood that's free of noxious odors, cleans up with water, is relatively easy, and downright enjoyable. In this article, I will share with you how I use acrylic washes to capture the look of aged wood, along with a few other tips and tricks.

Materials

Perhaps the most important element of this technique is the paint. I love working with acrylic craft paints. My personal favorite is the Delta Ceramcoat line, but there are many to choose from. I actually learned this technique using a different brand, but which brand you use is up to you. There may be a subtle difference in how evenly the color is absorbed, based on how finely the pigment is ground, but this won't affect the general technique.

Select a dark charcoal gray from your extensive palette of acrylic craft paints. What? You don't have any? Go to your local craft store or megamart and look in the craft section. It comes in small 2 oz. bottles with flip top lids (and larger sizes for basic colors). While you're there pick up a package of paint brushes. I prefer an assortment of brush sizes including a 1/2" wide, flat brush for most applications and a small round brush for



Create a sun-bleached wood platform like this one using inexpensive materials, basic tools, and simple techniques, without noxious fumes!



I like the look of old wood. Having grown up traveling the southeastern states from Florida to Virginia, the gray weathered look of an old barn or some other potential historic landmark just waiting to be preserved in miniature is easy to picture in my mind. Since I became a model

— by **Galen Gallimore**
photos by the author

railroader I've tried, like many others, to capture that look. I learned quickly that wood is often the best medium for modeling wood.

The day I discovered scale lumber was like finding a new continent after living on a styrene island.



Figure 1. Here are the basic ingredients for aging wood with acrylics. Clean water, acrylic black wash (50:50), craft paints, a paint brush, and of course, wood.

List of Materials

- 1/16" balsa wood sheet
- 1/8" square basswood strip
- Elmer's Yellow Carpenter's Glue
- Assorted acrylic craft paints

Tools

- Assorted small paint brushes
- Dish for paints
- X-acto knife
- Dental pick or small awl
- Small square
- Fine-lead mechanical pencil
- Brass-bristled brush

Ceramcoat Paints:
www.deltacreative.com ■

highlighting smaller areas. I found a starter set of various sizes for a couple dollars. Make sure there's a round brush with a good sized head.

For this article I constructed a small loading dock, or rather, the remnants of a loading dock, now used for maintenance of way storage. My example is in HO, but this technique can be used for any scale. Likewise, this type of structure could be found just about anywhere, but I think this technique favors narrow gauge or short line settings where structures are allowed to slip into this state of decay.

I used both strip wood and balsa sheet for this dock. That's right, balsa sheet. While I believe that anything worth doing well is worth doing slowly, especially when it's fun, I do like the occasional shortcut. This is one I developed for covering a large

area of planking without laying actual planks. As for adhesives, I like to use good ole' yellow carpenter's glue with wood. CA (super glue) is okay, but some joints I've tacked together with CA have eventually dried up and come apart. Again, use what you prefer.

Before you paint, select the wood for your project. For the deck of the dock, I measured the area I wanted it to cover, then cut the balsa to that size. Knowing that I wanted some of the "boards" to be broken or missing, I cut the sheet into smaller sections. Before you cut, determine which direction the planks will be laid, so that the wood grain is going the right way.

The Pencil Trick

Here's a cool trick. Find a mechanical pencil. Click out a short length of lead, around a millimeter. This is the depth of the cracks between the planks. Now determine how wide the planks will be and make marks along one edge of the sheet accordingly.

Next, take a small square and line it up with a mark. Push the pencil into the wood and mark the line. Continue down the length of the sheet. Be careful. Scribing the wood like this may cause the sheet to bow when it's wet. However in this case it will be secured on a frame so that shouldn't matter in the long run.



Figure 2. Thinning the paint on a plate allows you to control the consistency of the wash. For repeatable results, start with a drop of paint and count the number of brush-loads of water you bring to the plate. Then you can scale up the amount using this rough ratio if you need to stain a larger amount of wood.

The pencil will leave a gray mark and scribe the soft balsa wood all at once. If the scribed lines (gaps between the planks) aren't deep enough, reset the pencil and go at it again.

Don't worry about separating individual planks now; that can happen later once the dock is assembled. The idea is to create the illusion of individual planks with less work. In fact, you don't want to go all the way through, so that the sheet remains solid.

Painting Technique

Using a wash to stain wood is not a new idea. However, it takes some practice to master. I begin with a small jar of water and a plastic plate or dish. You can mix a wash in a separate jar in order to duplicate your results later, but I prefer a more spontaneous approach. Shake your paint bottle to mix it, flip the top open, and squirt at least a nickel-sized drop of paint up next to the lip of the plate. You want a little depth here to work with.

Take a round brush and dip it in the water. Using the brush, bring some water onto the plastic plate and put it next to the paint, allowing the water and paint to mix. What you want is a range of paint from full strength to fully dilute. The strength of paint will determine the shade of gray once it's absorbed into the wood.

Bear in mind that different kinds of strip wood will absorb different amounts of stain differently. The balsa will soak it in easily and quickly while

basswood or pine stripwood may take a few more applications or stronger paint to match shades. Or, just let the variation be. It's all gray, but not all the same shade. Variety is important.

Dip the brush in the paint/water and put some on the wood. Too dark? Quick! Dip the brush in the water jar and flow some onto the wood. Try a lighter wash or add more water to the paint. It's a balancing act between paint and water and how much the wood will take. Start lighter and darken as you go. Stain a few pieces and let them dry. Come back later to see how the color looks. Adjust the paint and water mix and have at it again until all has been stained. The wood may bow and warp when the wash is applied. Don't freak out! Just apply more wash or clean water to the other side of the wood. When it dries it should be straight and flat since it will dry more uniformly. Allow the wood to thoroughly dry before using it in the finished model in order to avoid any gaps due to shrinkage.

Now assemble your structure. If you assemble the structure before staining, be aware of the glue joints. The beauty of carpenter's glue and CA is that they are waterproof. If glue joints aren't going to be visible, you could assemble the structure first and stain second. Knowing that much of the wood would be exposed to view, I took particular care to stain every surface.

Finishing Touches

If you're satisfied with how your structure looks at this point, great,

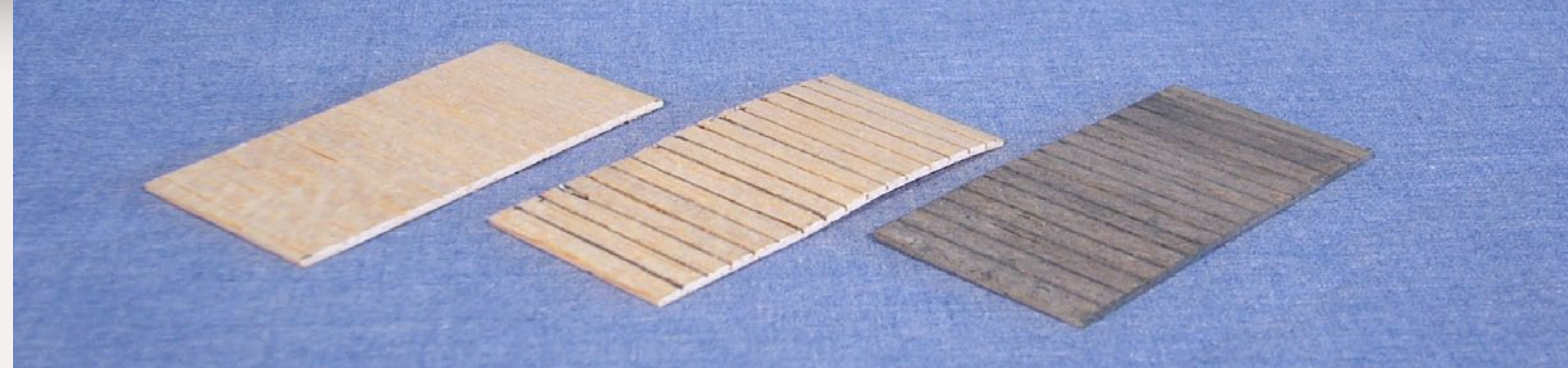


Figure 3. Don't want to lay individual planks? Start with balsa wood sheet cut to size, apply the 'pencil trick' to create shaded depressions in the wood, and then stain with the basic paint wash. Individual planks could also be carefully stained further with a small brush to create variations in wood tone.

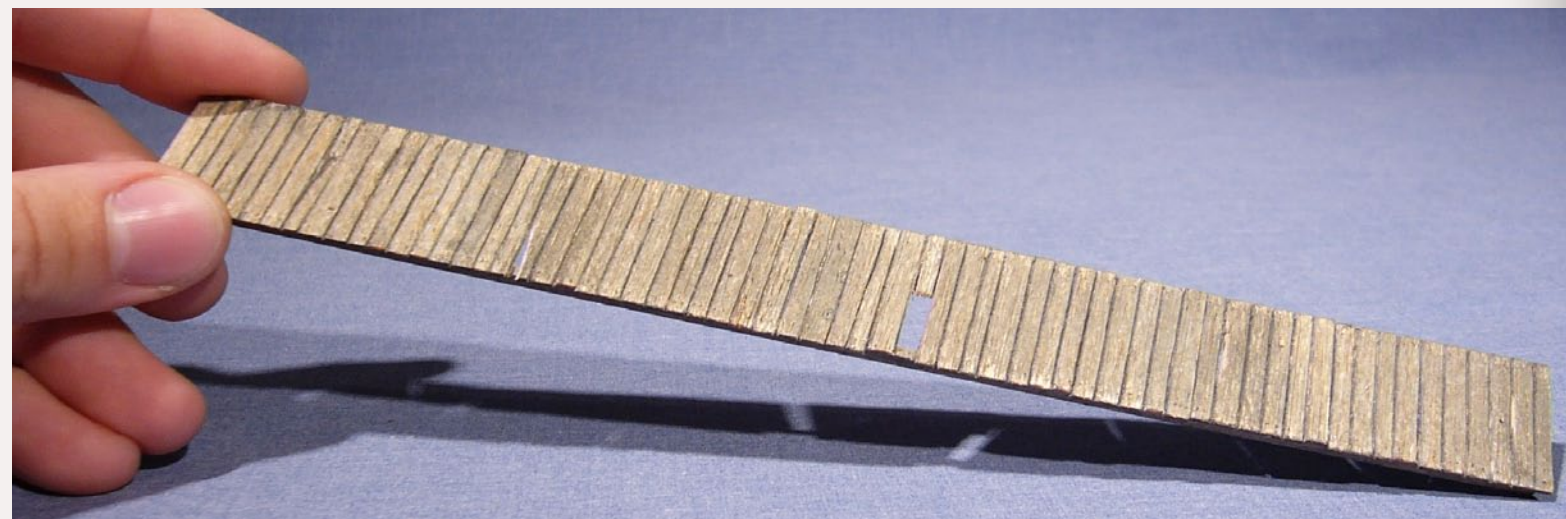


Figure 4. I created a long platform by gluing several balsa sections on top of long basswood strips. At this stage I enhanced the illusion of individual planks by notching the edge of the wood between the lines to vary the length of the 'planks and removing a plank or two.



Figure 5. Cut away and lift a few planks with an X-acto knife, create knot and nail holes with a dental pick, a pin or a small awl, and stroke a brass bristled brush along the grain to deepen the effect. Be careful not to overdo the brass brushing as balsa wood is very soft.

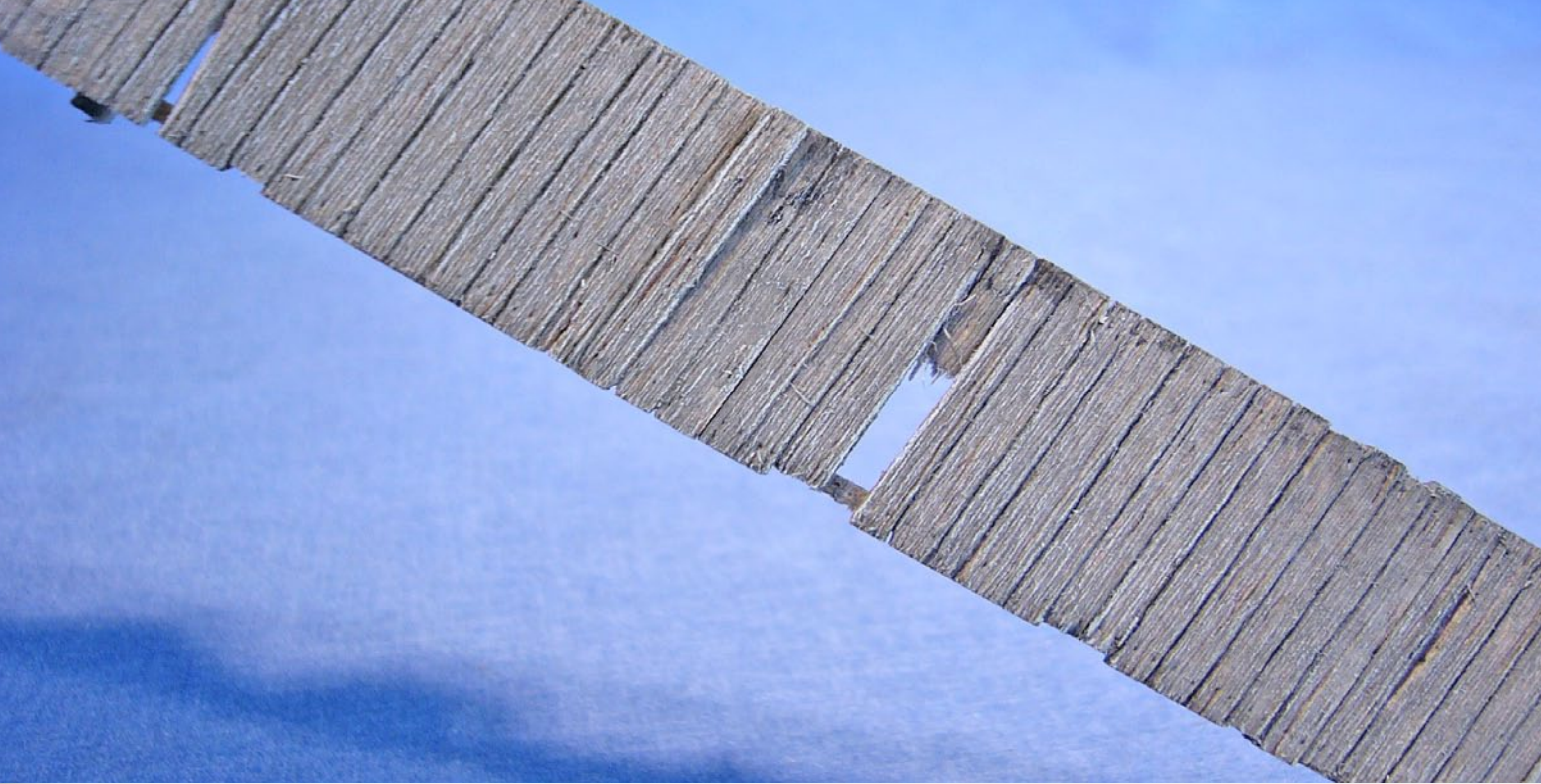


Figure 6. The final steps to create that aged look are a black wash and a dry brush using light gray to enhance the wood grain, knot and nail holes.

you can stop here. But if you'd like to take it to the next level, read on. For my dock, I wanted a sun-bleached appearance. This dock is on a river landing where fog creeps in all the time, so moisture has worked its magic and moss has been growing. My MOW crews aren't the most delicate folks so the effects of years of freight moving over this dock are visible. Much of this can be simulated with further washes of color.

I used a pin tool to push nail holes in the surface of the planks. Then I cut through the score lines with a hobby knife in several places, creating individual planks. All of the plank sections were scraped severely with a brass wire brush. Some of the planks I removed and others I broke. With the pin and the knife I put a few large knot holes and other variations in the wood surface. Now it's time for a second wash.

This time I used a black wash. My acrylic black wash is 50/50 paint and water. This may sound pretty dark, and it is. I rarely use it full strength. I generally dip my brush in the black wash, put some on the plastic plate, then dip in the water and dilute the wash from there. This allows you to see what you have before putting it on the model. However, I used it without dilution this time, because I knew the surface was so porous and I was going for a dark gray look.

This wash will darken the wood and bring out the details like the nail

holes. Work carefully here, for where you hit the same place twice the color will be that much darker in that spot. Wash until you're satisfied and set it aside to dry.

Once it's dry, it's time for dry brushing. I'm still using acrylic paint. Choose a light gray color. I used Quaker Gray from Ceramcoat. Find a dry spot on the plastic plate and put a small drop there. For dry brushing I use a brush I don't mind losing, hence the cheap starter pack of brushes. However, if you clean the brush shortly after use with warm soapy water, even cheap-o brushes will last a long time.



Figure 7. The kind of place your folks warned you not to play. Don't forget to place those broken planks beneath the platform. Weeds, debris and detail-parts complete the scene, but the aged wood is the foundation.

Dip your brush in the paint and wipe it on the plate. Remember – you control how much paint is on the brush. Painting is no accident. How much ends up on the surface is up to you. The plastic plate gives you a chance to get an idea of how much paint will end up on the surface. Lightly scuff the surface with the brush so that the paint hits the high spots in the wood grain. It's better to make several applications, checking the color between each, than putting on too much at once.

What has just happened is the basic formula for pretty much all painting I do with acrylics. First a base coat, then a black wash and finally a highlight dry brushing. (Giving credit where it's due, this technique comes from Dave Frary's scenery book titled, "How to Build Realistic Model Railroad Scenery", Kalmbach, 1983.) For staining wood, the first washes of color determine the base color. The black wash also serves as a stain and the dry brushing adds highlights. To

simulate moss, either mix a wash of green on the plate, or use a dry brush technique. I find the wash to produce a subtle moss effect while the dry brush is more pronounced.

Color Variations

Not all wood ages to gray. But all wood can be stained with acrylic washes. Don't let the actual material you're working with stand in the way of simulating another type of wood. I've used other shades of acrylic washes with great success to simulate wood of varying types and ages. Good acrylic colors to use for other shades of wood include Raw Sienna, Burnt Sienna, and Burnt Umber. These are commonly named colors and make good base coat washes.

Another color I use for a base wash is Delta's Mudstone. It's versatile enough to be a highlight color as well. For newer wood such as pine or poplar try Delta's Flesh Tan straight or mix

in a drop of Straw to yellow the wood. The color I used as a base coat for this article, and perhaps my favorite for washes, is Graphite by Americana (DecoArt). I'm sure that other brands have equivalent colors. Delta has a color chart on its website, but the best way is to look at the actual color in the store or buy a bottle and experiment with it.

Give It a Try

I highly recommend acrylic washes for weathering and aging wood. This medium is versatile and very forgiving. The brushes clean up with soap and water, as do your hands and your clothes. There are no fumes to worry about and the price is right. I have many bottles that I purchased several years ago that show no sign of drying out. (I'm half convinced my bottle of Raw Sienna is a miraculous never-ending bottle – I use it all the time and I've had it for years!). Plus, I can almost guarantee you'll never need a pair of pliers to open a flip-top lid.

If you're looking for an alternative to toxic stains for aging wood, I encourage you to give acrylic washes a try.



Galen Gallimore

Galen's first train was a wooden train his Grandfather built for him as a toddler. From there it was an HO train set on a plywood board. A few years later Galen made the shift from playing with trains to scale model railroading. He is currently living in Southwest Washington State where he serves as Pastor in a Lutheran church.

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Track is a Model Too

– by Greg Baker
Photos by the author



Tips to enhance the realism of your track and make it tell a story ...

As someone who works for a full-sized railroad, I know how important track is. I have also come to appreciate the nuances that are involved in how the prototype builds their trackwork.

Since I have always enjoyed detailing locomotives, rolling stock and buildings, I thought “why not detail my track too?” With a little planning and foresight you can really transform the look of a railroad and let the track help to tell the story.

Simply distinguishing the mainline, with its groomed ballast from the weed-infested industrial trackage can help your visitors understand where they are on your pike. I have come up with some things that will take your trackwork to the next level and increase the realism of your railroad from start to finish. Remember track is a model too!

I think about exactly what I am trying to model and develop a track plan accordingly. I use prototype practices to guide how I set up my trackwork and to designate which type of track I am trying to model.

With my plan complete and my benchwork in place, it's time to do the trackwork.

Bill of Materials

Craft Paint:

Burnt Umber
Raw Sienna
Midnight Black
Pure White

Floquil Paint Markers:

(<http://www.testors.com/category/133504/Floquil>)

Rust
Weathered Black
Rail Brown
Rail Tie Brown

Central Valley Model Works:

(<http://cvmw.com/>)

Tie Strips
8001 9' Mainline
8002 8'6" Mainline
8003 Branchline

Micro Engineering:

(<http://microengineering.com/>)

16083 Code 83 Weathered Rail
Code 70 weathered Rail
Code 83 Rail Joiners
Code 70 Rail Joiners

Details West:

(<http://www.detailswest.com/>)

931 Code 83 Joint bars ABS plastic
933 Code 70 Joint bars ABS plastic

Midwest Cork:

(<http://www.midwestproducts.com/>)

3013 HO Scale 3' Section
3019 N Scale 3' Section

STEP 1: Roadbed



Figure 1

Figure 1: Here's the finished result so you can see where we're headed. Using these tips and tricks can help you take your trackwork detail to the next level of realism and plausibility.

Figure 2: I start with a flat roadbed surface such as foam or plywood – I prefer $\frac{3}{4}$ " plywood. After the sub-roadbed has been placed and prepared, I mark the centerlines where my track will be from my track plan. I use a flexible straight edge and a pencil to make my marks.

With any good project, a firm foundation is key to being successful. If you start with materials that are not up to par, the finished product will lack polish and won't function properly.

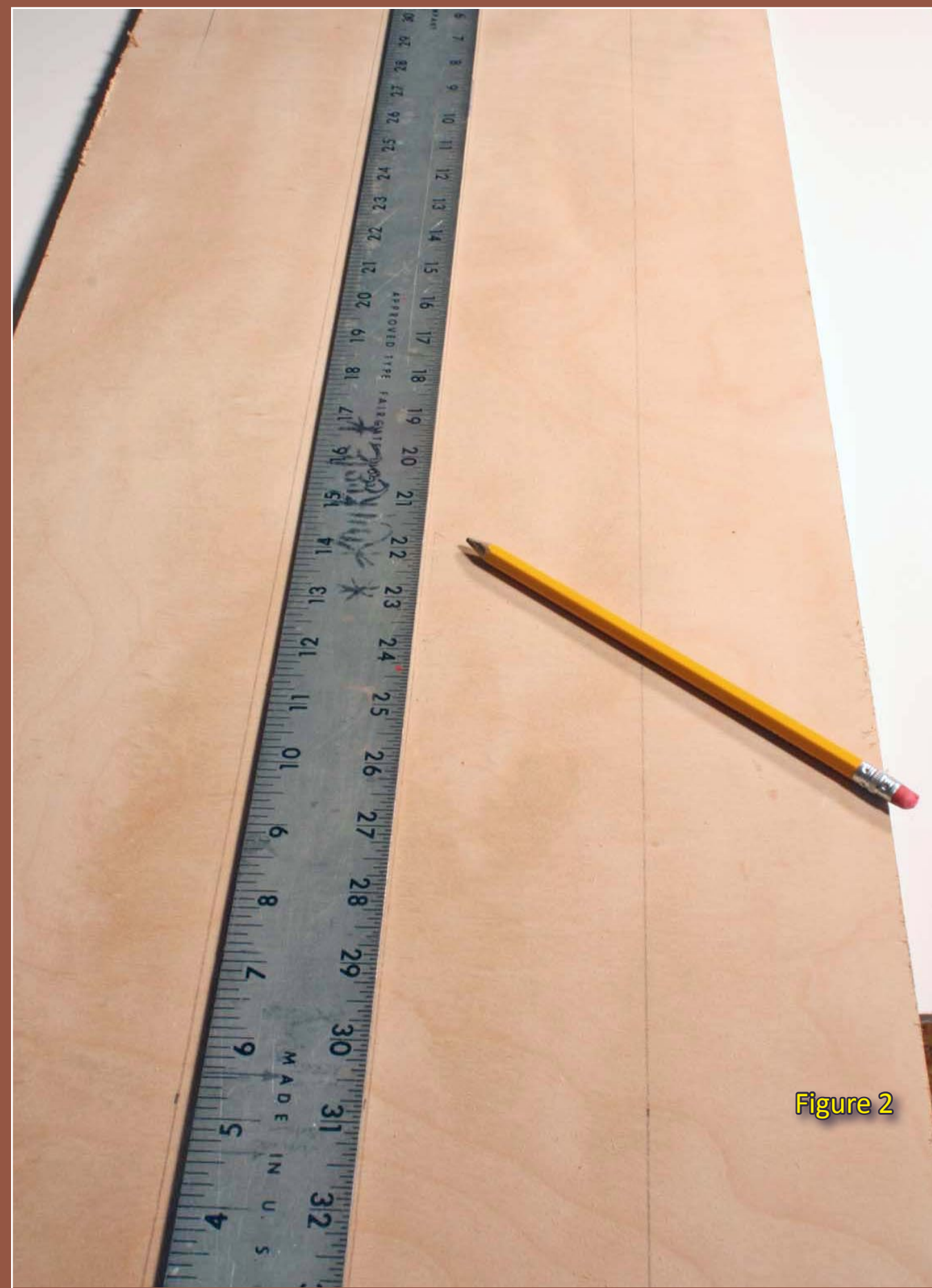


Figure 2

STEP 2: Laying Cork Subroadbed

After deciding which tracks will need cork, I gather my materials for the this step. I use HO scale cork for the mainlines, N scale cork for sidings and some industrial tracks, and all other track is laid right on the plywood. I like to work in three to four foot sections at a time so the caulking does not dry out or get onto other areas I am working on.



Figure 3: With the pencil lines marked out, I then lay a bead of clear silicone adhesive.

Figure 4: I work in small areas with the caulking as it has about a 15 minute working time. So as soon as I finish laying a bead, I spread out the caulking with a scrap of cardstock.

Figure 5: As soon as the caulking is spread, I lay out a piece of cork and press it firmly into place. If I got too much caulking, I will use my scraper to wipe up any excess.



Figure 6: One thing I have found is that staggering the joints of the cork helps keep it from shifting one way or the other. With all cork in place, I clean up any excess caulking and wait for it to dry before moving onto the next step.

STEP 3: Smooth Out the Cork



Figure 7

Figure 7: After the caukling is dry, I use a hand rasp to even out the top of the cork, creating a smooth surface on which to lay the ties and to transition from the HO to the N scale cork as needed. In my opinion, the angles on commercial cork are too drastic; this is easily remedied with the rasp.

STEP 4: Paint the Cork a Ballast Color



Figure 8

Figure 8: After I vacuum up the mess from rasping, I grab my paint materials since I prefer to paint the cork before laying the track.

STEP 4: Paint the Cork a Ballast Color *Continued ...*



Figure 9



Figure 10

Figure 9: I like to paint the cork the color of my ballast because it helps to disguise any imperfection or thin spots that may arise in the ballast later and it helps me visualize in advance how the track in the scene is starting to look.

Figure 10: The color only needs to be close, since it will later be covered up by track and ballast. With the cork roadbed painted and dry, I'm ready to move on to the track.

Bill of Tools:

Tools:

Track Gauge
Sprung Tweezers
Tweezers
Xuron Rail Cutters
Sprue Nippers
Jewelers File
Cryonlative Adhesive (CA)
Toothpicks
Clear Adhesive Caulking
#5 Xacto Knife
#11 Xacto Knife
NWSL Chopper
Rasp
Nail Set
MEK

Barge Cement

Bastard File

Toothpicks

Scenery Tools:

Spray Bottle

Spoon

Matte Medium

Rubbing Alcohol

Soft brush

Dental tools

Worn Toothbrush

Assorted small paint brushes

1" Paint Brush

STEP 5: Select the Type of Track

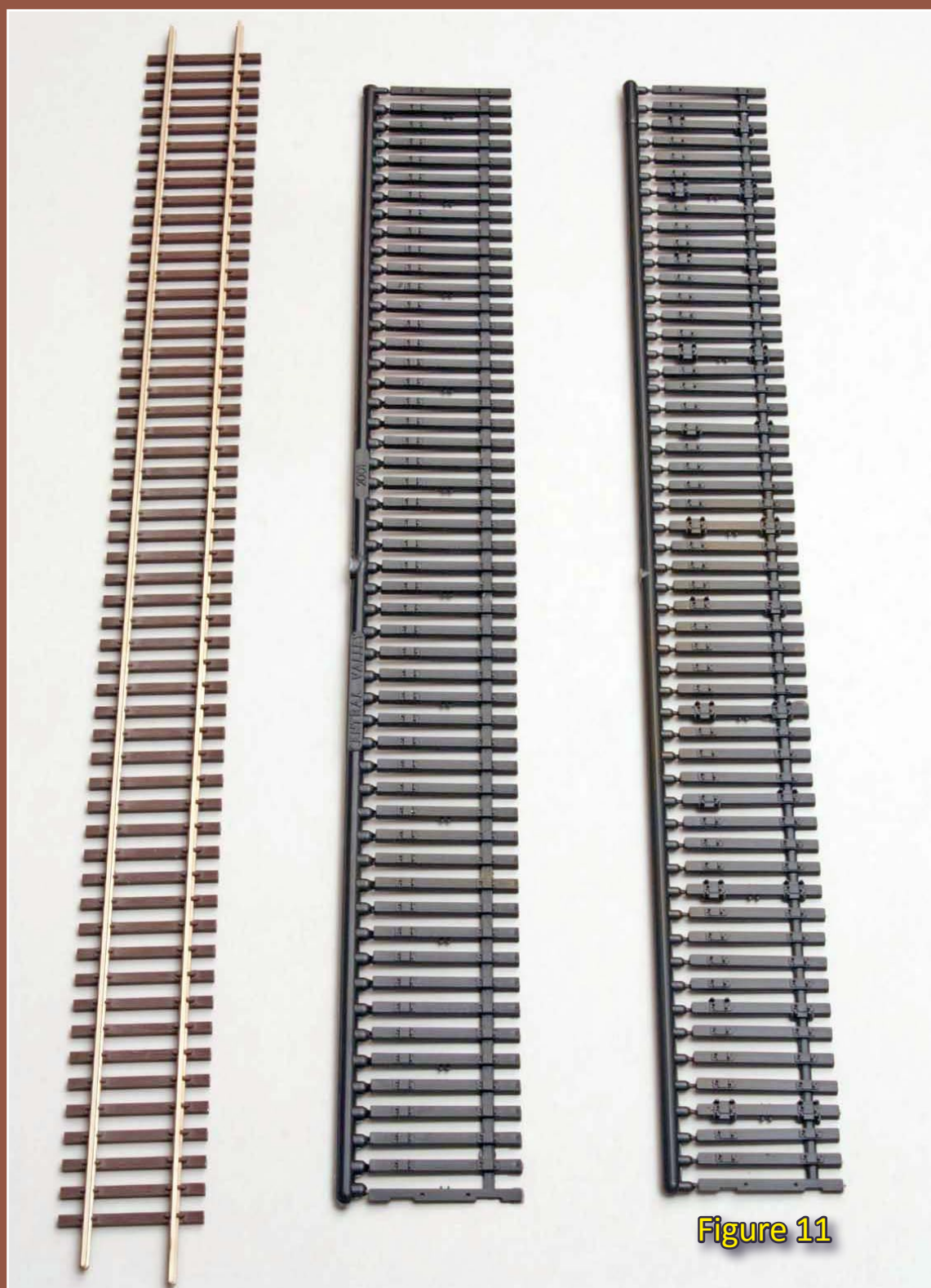


Figure 11

Figure 11: Here is a comparison between Atlas Code 83 flex track and two different styles of tie strips from Central Valley Model Works. Notice the tie spacing variations and the extra detail on the Central Valley tie strips.

Depending on what my final goal is for the scene, I pick the type of track and begin preparations. Figure 11 shows the different types of setups I used for this article. On the left is Atlas flex track; the other two are tie strips from Central Valley Model Works (mainline is in the middle and siding is on the right – mainline ties are closer together, and siding ties have more spacing).

For my staging areas or yard areas with lots of track, I prefer to use commercial flex track. This allows me to get trains running quicker, and with some detailing I can blend the flex track into the sections that use the more detailed Central Valley tie strips.

For areas with less trackwork or where the viewer will be right next to the track, I prefer the Central Valley Model Works tie strips. Although the CVMW strips take more work to lay, I think they bring the best prototype feel to my HO trackwork.

Generally I prefer code 83 rail for most all of my HO track, although I will use some code 70 for industrial trackage. I find that properly weathering track can make it look good even if the rail is a bit oversize or if the spike detail is not as fine.

STEP 6: Prepare the Ties

Once I have decided on the track type, I prepare the ties to represent different track types based on their use. With the CVMW ties, I just use my predetermined strips for each track type. Part number 2002 is for mainline, part number 2001 for sidings and some industries, and part number 2003 for industrial or back tracks.

Per prototype practices, at every spot that has to support a joint, the ties are placed closer together. The prototype I model used 39' pieces of rail and offset their joints, so this occurs every 19 ½', and that's what I replicate on my model. Figures 14 and 15 show what I do to model industrial trackage with flex track.

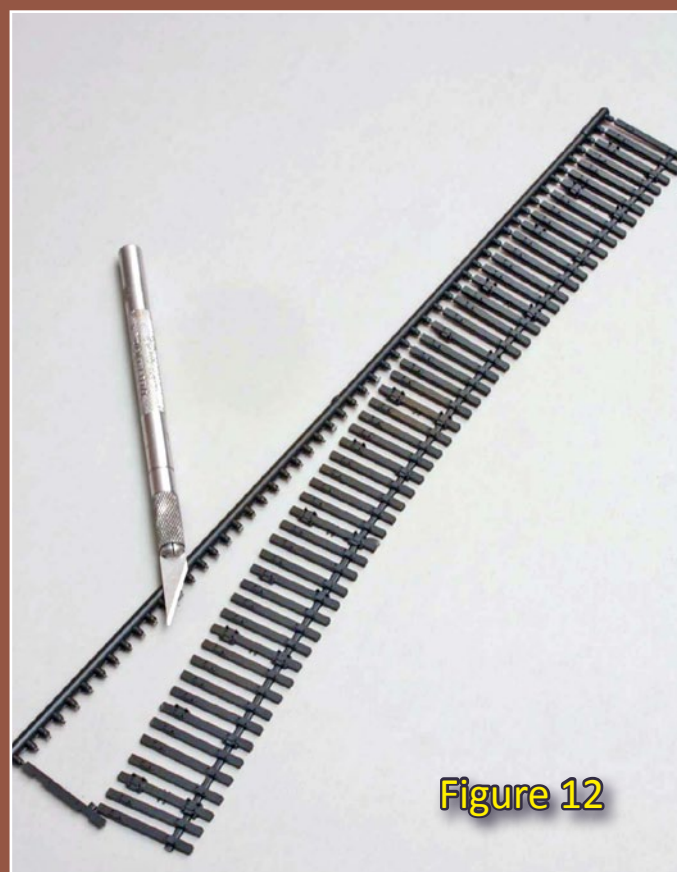


Figure 12

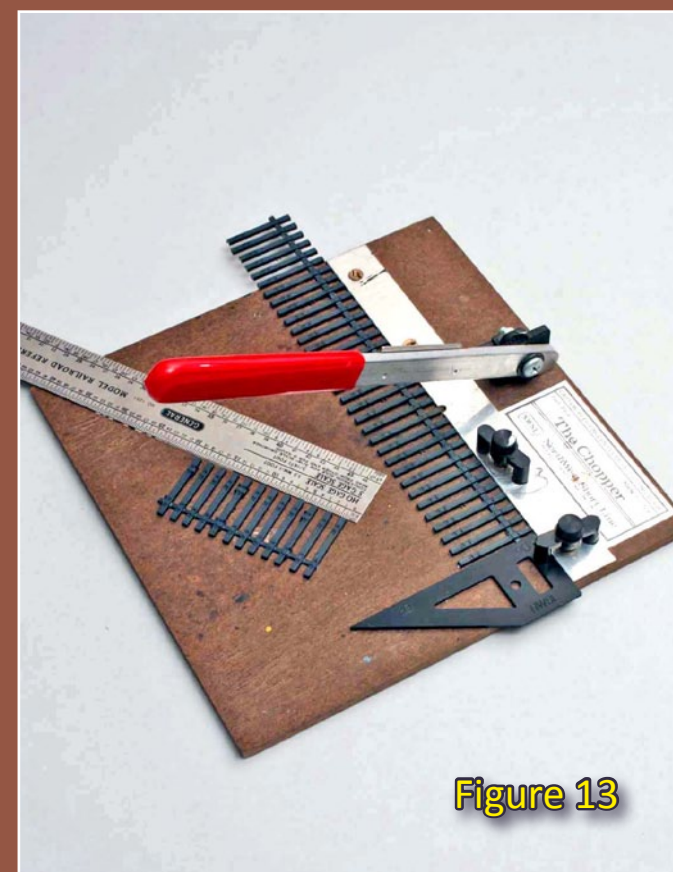


Figure 13



Figure 14

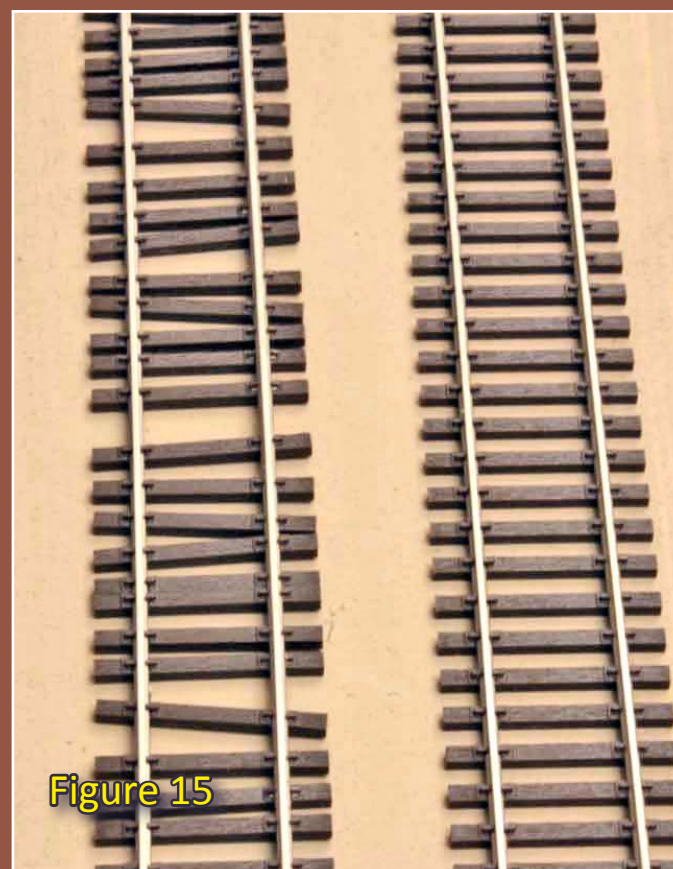


Figure 15

Figure 12: Using a sharp knife, I separate the tie strip from the sprue.

Figure 13: Taking a cutting device, like the Chopper, I resize my tie strips into scale 19'6" sections. Although this is time-consuming the final results can really be stunning.

Figure 14: If I am using flex track, I find the tie spacing to be a little too uniform. I use a set of nippers to remove some of the ties and some of the spacers on the underside to more easily move them.

Figure 15: With my slicing and dicing done, these pieces are ready for the next step!

STEP 7: Laying the Ties/Track

With the ties prepared, I double check my working surface to make sure it has no major imperfections that will affect the ride of the trains and I do some test fitting. Then I apply the caulk as shown here.

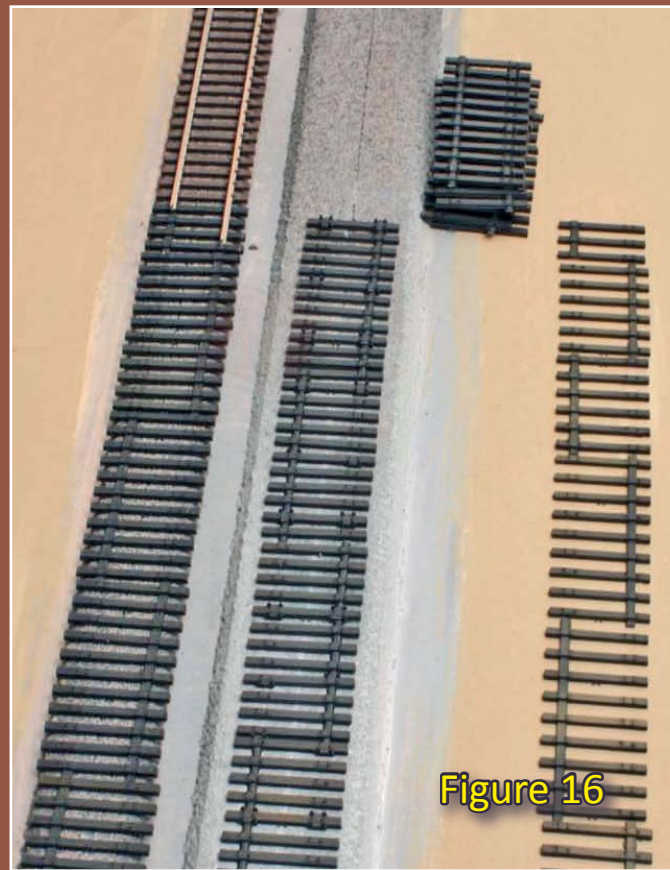


Figure 16



Figure 17

Figure 16: I dry-fit the track to make sure I have enough materials for what I plan to do. I then make my adjustments accordingly, clean my work area, and get ready for final placement.

Figure 17: I use the same materials and tools as I did before when placing the roadbed with caulking.

Figure 18: I again use the silicone adhesive, laying out a bead along the top of the cork.



Figure 18

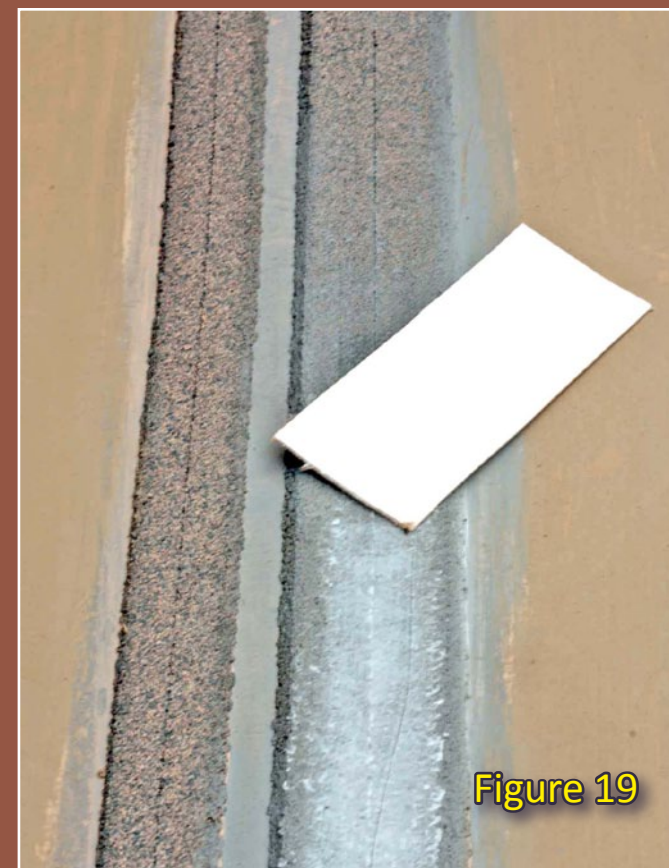


Figure 19

Figure 19: Using my handy piece of cardstock, I again even out the caulking, trying to get it as uniform as possible, and avoid getting it on the side of the cork.

STEP 7: Laying the Ties/Track *Continued ...*

I then place the ties and flex track down into the caulk as shown here.

The caulking has about a 15-minute working time before it becomes too difficult to move the ties or track around.

I always try to keep the amount of caulking to a minimum, using just what I need to get the ties to stick. Having globs of calking in between the ties just means more work later.



Figure 20

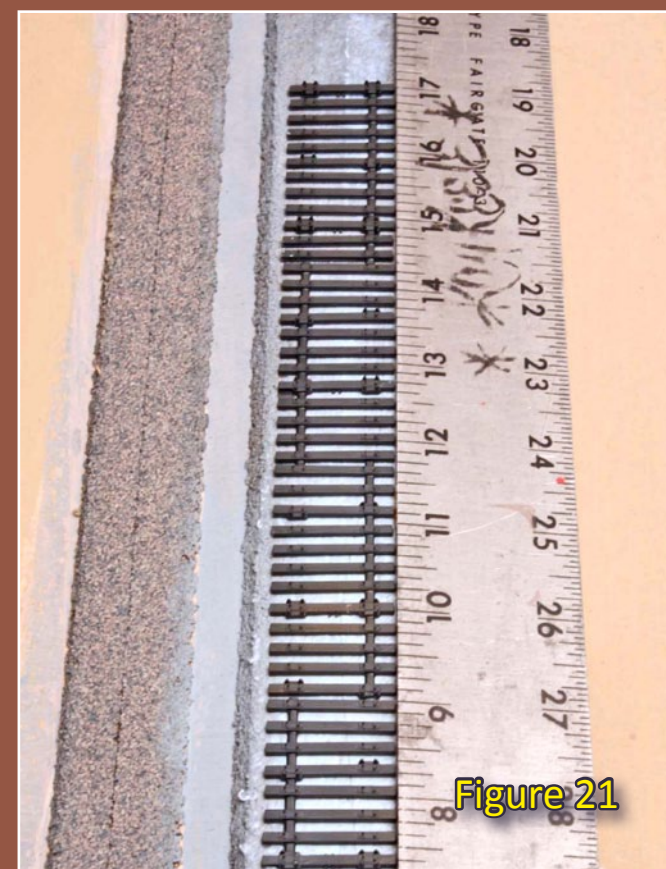


Figure 21

Figure 20: I place the ties into the caulking and try to line them up as best I can by eye.

Figure 21: For areas where track needs to be completely straight I use a straight edge to align it.

Figure 22: You can see the CV ties and flex track combination in place and ready to be finished.

Figure 23: Here is the flex track end, all glued in place and ready for weathering.

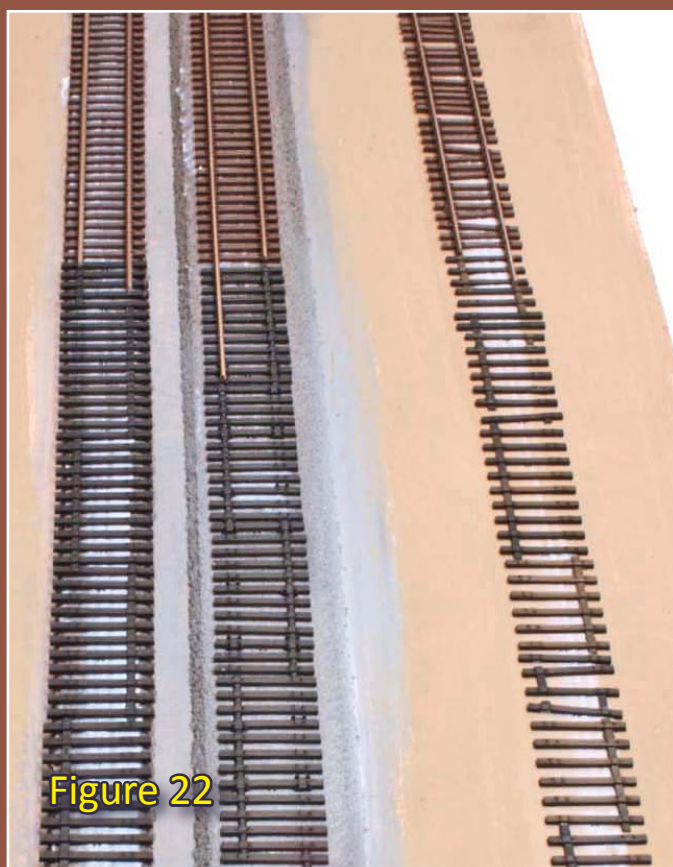


Figure 22

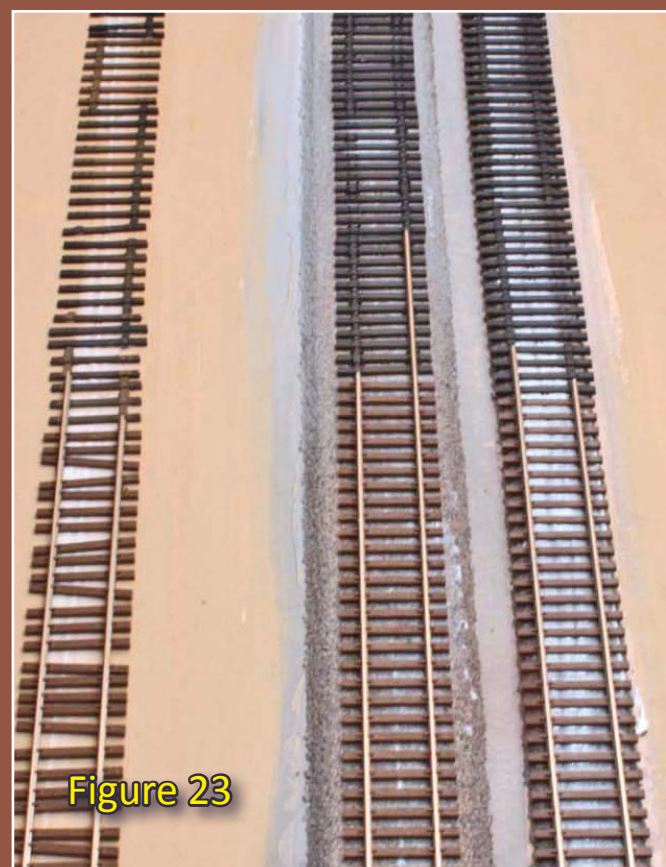


Figure 23

STEP 8: Weathering the Ties

Figure 24: These are the paints I use to weather my ties.

Figure 25: I use an assortment of brushes, depending on what type of weathering and color I am trying to achieve.

Figure 26: With the ties dry-brushed the base color, it is now time to focus on detailing the ties with other colors.

I weather each type of track – main, siding, industrial – differently so the casual observer can quickly distinguish between them.

I use craft paint (Figure 24) since it is cheap and can be easily cleaned up with water. I use a variety of brushes (Figure 25), but I always start with the biggest and work to the smallest.

For my mainline or new ties, I use black mixed with raw sienna and a little burnt umber. For best results I try to use prototype photos to match the colors of my ties.

Using a sweeping motion, I work back and forth with the grain of the ties, moving up and down the track. I use the same mix for the siding with a little more sienna and umber mixed in.

For my industrial track I use white and black to mix a light gray to add more age to the ties. I then work along the track, occasionally dipping into a little sienna or umber.

Do not to overload the brush, but rather dry-brush the paint on. I have found that dry-brushing looks more realistic and brings out the wood detail on the ties. In Figure 26 you can see the base colors completed.

I go back with smaller brushes and work some different tie color variations into the line. I paint some new ties (using the mainline mix) on the industrial track and paint some older ties (using the industrial mix) randomly along the mainline.



Figure 24

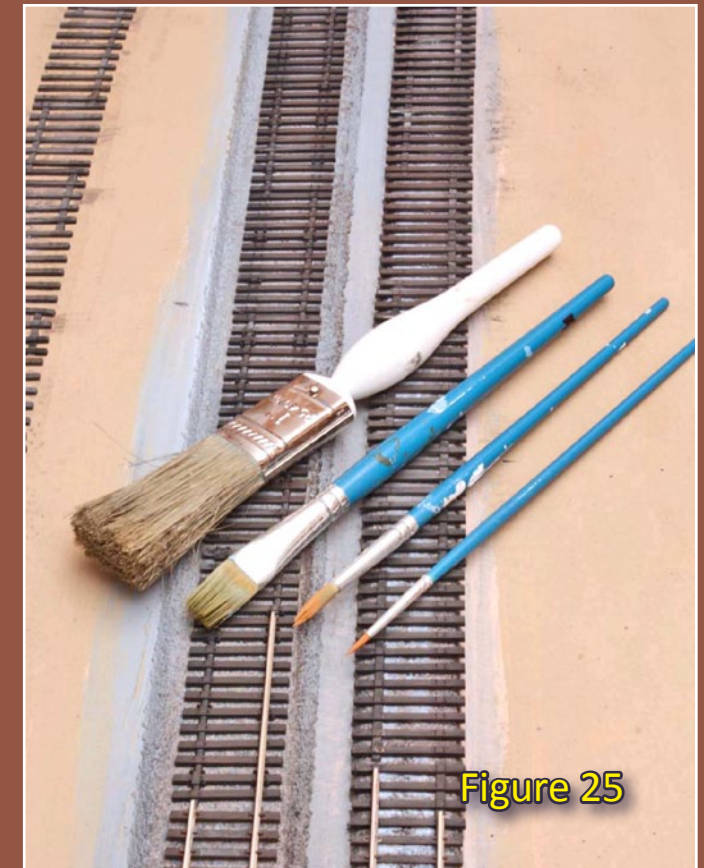


Figure 25



Figure 26

STEP 8A: Paint the Tie Plates (Central Valley Ties Only)



Figure 27



Figure 28

Figure 27: I think my favorite new tool is the paint pens offered by Floquil. They make adding rust to the tie plates very easy.

Figure 28: Adding more or less rust can make the track look older or newer.

On the CVMW ties, I go one step further using my Floquil rust paint marker (Figure 27) and paint the tie plates. On the mainline and siding, I try to keep to just the plate itself, but on the industrial track I allow the marker paint to seep out and add age to the ties as well (Figure 28).

STEP 9: Preparing the Rail Joints

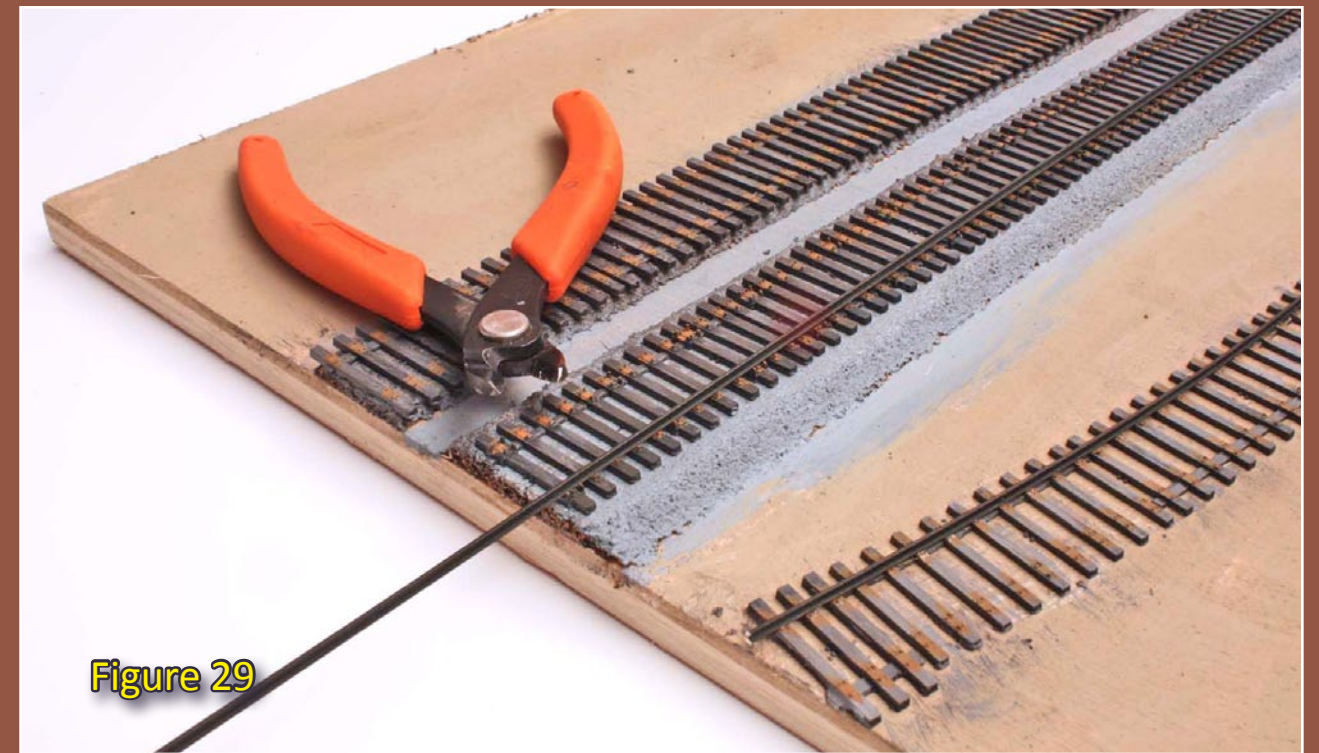


Figure 29

Figure 29: With my handy nippers, I cut the rail to length and lay out rail joint locations.

If I am using flex track, there is no need to do anything else to the rail except to decide where my joints will be. One thing that always bothers me on models is having joints directly opposite each other. Unless absolutely unavoidable, the prototype does not do this.

I slide the rail down and keep the joint separated, since this looks much better. I find it's easy to adjust the rail on Atlas flex track, as one rail is usually free to move.

On the CVMW tie strips, I just plan where I am going to place my joints by test-fitting the rail onto the tie strips. I usually start at a switch or another fixed track type (which is also more prototypical).

Once I have done all my tie strip-rail planning, I cut the rails to length, as seen in Figure 29. With my rails tested, I then prep the rail joiners and the locations where the rail joiners will sit.

STEP 9: Preparing the Rail Joints *Continued ...*



Figure 30



Figure 31

Figure 30: Using X-acto knife to flush up the tie-top.

Figure 31: With the area cleaned out, I place the joiners.

Figure 30 shows how I place a rail joiner. I use an X-acto #11 chisel blade and remove the detail on the tie to create a place for the rail joiner to rest. This allows the joiner to lie flat without a hump in the rail. I find it better to make multiple passes with the knife when removing the detail as the ties can break off if you attempt to remove too much material in a hurry.

Figure 31 shows the joiners in place waiting for the rail to be added. If you're planning to add track feeders at the rail joiner, now is the time to do it.



Greg Baker

Greg Baker has been “seriously” model railroading for the past 10 years, but as long as he can remember he has always been fascinated by trains. His main interests are the railroads of Central Oregon with the focus of the SP&S along the Oregon Trunk and the City of Prineville Railway.

He currently resides in Kansas with his wife and son as he continues his career in railroading. An active member of the area Free-Mo group, he also helps out with the annual Mid-Continent Prototype Modelers meet held in Wichita.

STEP 9A: Applying the Rail (Central Valley Tie Strips Only)

Figure 32: A recycled glue jar with MEK and Barge cement.

Figure 33: With the rails in place and glued down, I double check the track gauge.

Figure 34: All done, and ready to paint the rail.

For the CVMW ties, I prefer Micro Engineering weathered rail, which comes pre-blackened. I follow CVMW's recommendation of using Barge cement to attach the rails to the tie strips. I mix the barge cement 50:50 with MEK and store it in a jar (Figure 32).

This mixture produces a very strong odor. I always run a fan and vent it when I am working with this material. I also recommend you avoid skin contact with it.

I use a brush to apply the mixture to both the ties and underside of the rail, then I press the rail into place. I keep some straight MEK handy and use it to reactivate the Barge cement if there is an area that does not adhere well.

When using the straight MEK, I must be careful to not overdo it. Too much MEK can dissolve the plastic ties. I usually work one rail at a time, placing the rail closest to the backdrop first, then work forward.

Although the CVMW ties strips have a self gauging slot, I also employ a Micro Engineering track gauge and run it back and forth over the section until the glue dries (Figure 33). This allows me to place equal pressure on the rails to ensure the track is in gauge.

Once the rail is fixed in place, I fold over the CVMW spike heads using a nail set. Figure 34 shows all the track in place and ready for paint.



Figure 32

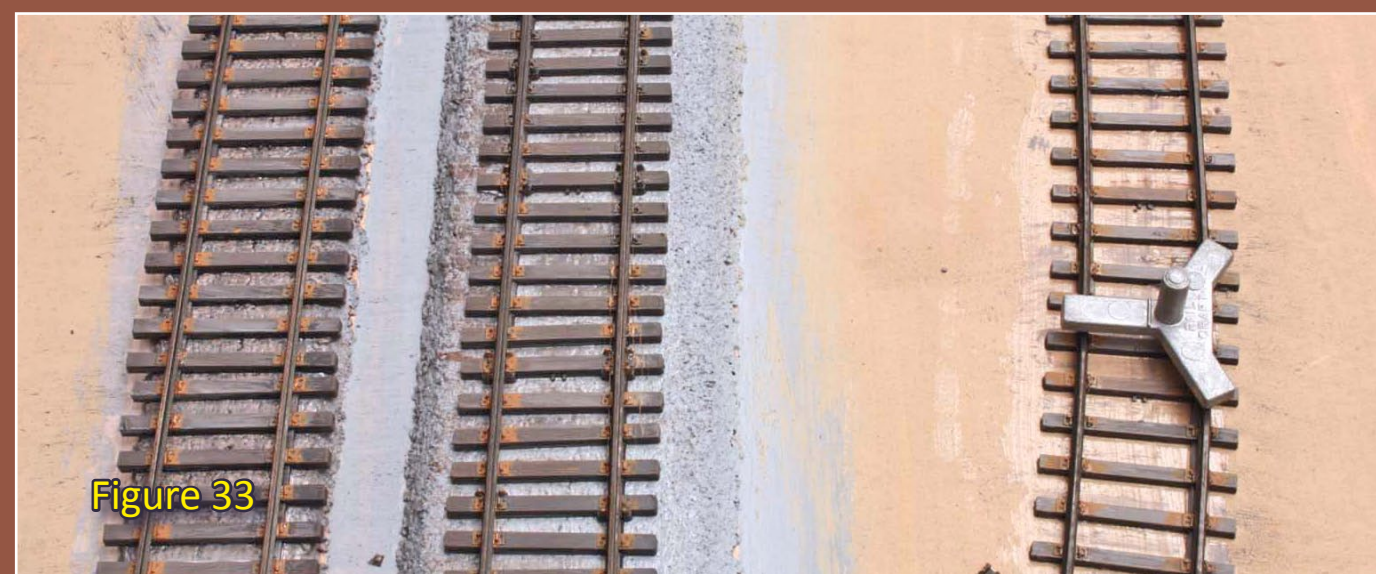


Figure 33

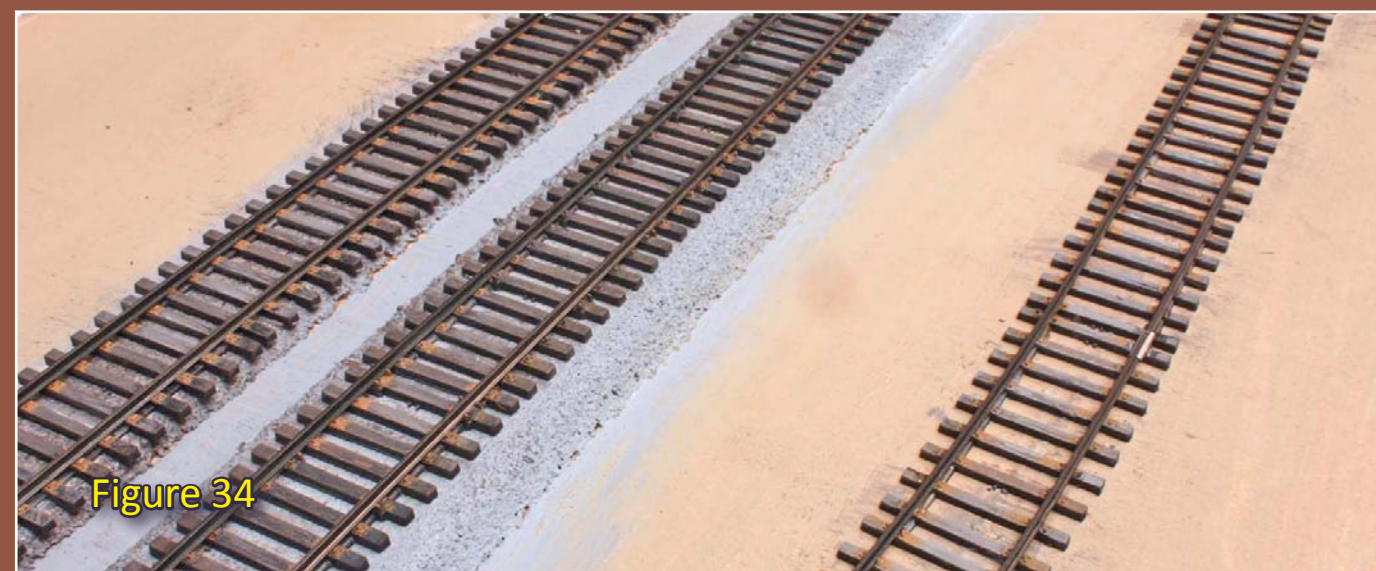


Figure 34

STEP 10: Pre-painting the Rails



Figure 35



Figure 36

Figure 35: Applying a base coat of weathered black to the flex track.

Figure 36: I apply rail brown to all the rails.

With the rails in place I make a quick pass with the Floquil paint markers. The flex track receives a painting of weathered black so it matches the weathered rail I've applied to the CV ties (Figure 35). I then paint all the rail (both on the flex track and on the CV ties) rail brown to blend it all together (Figure 36).

STEP 11: Applying Rail Joint Bars



Figure 37

Figure 37: Basic tools I use to place joint bar details onto the rail.

The most recognizable detail on track is the rail joint bar. On the prototype, each joint has two cast pieces (one on each side of the joint) that join one rail to another using bolts or other fasteners. Here are the tools I use to add this detail to my model railroad track.

You can purchase joint bar detail from a various manufacturers, but I prefer the ones from Details West. The Details West joint bar has 6 bolts and they're made from ABS plastic. Since they are plastic, I can easily manipulate them to fill different needs.

STEP 11: Applying Rail Joint Bars *Continued ...*

Figure 38: I paint the Details West plastic joint bars rail brown.

Figure 39: Resizing the 6 bolt bars to 4 bolt bars with sprue nippers.

Figure 40: I notch the top on the rail to simulate a rail section joint.

I start by painting the bars rail brown or rust brown shown in Figure 38. Using the prototype as a guide, I decide how much of the bar I am going to use. For my sidings and mainline, I use the 6-bolt bar as is. I use a set of sprue nippers to cut off two bolts, one inside one outside to make shorter 4-bolt bars when needed on lighter trackage (Figure 39).

With the bars sized as required, I work from where my track rail joiners are along the rails. I use a scale ruler to mark 39 feet and using a sharp X-acto knife I scribe a notch in the top of the rail head, as shown in Figure 40 and apply a joint bar.

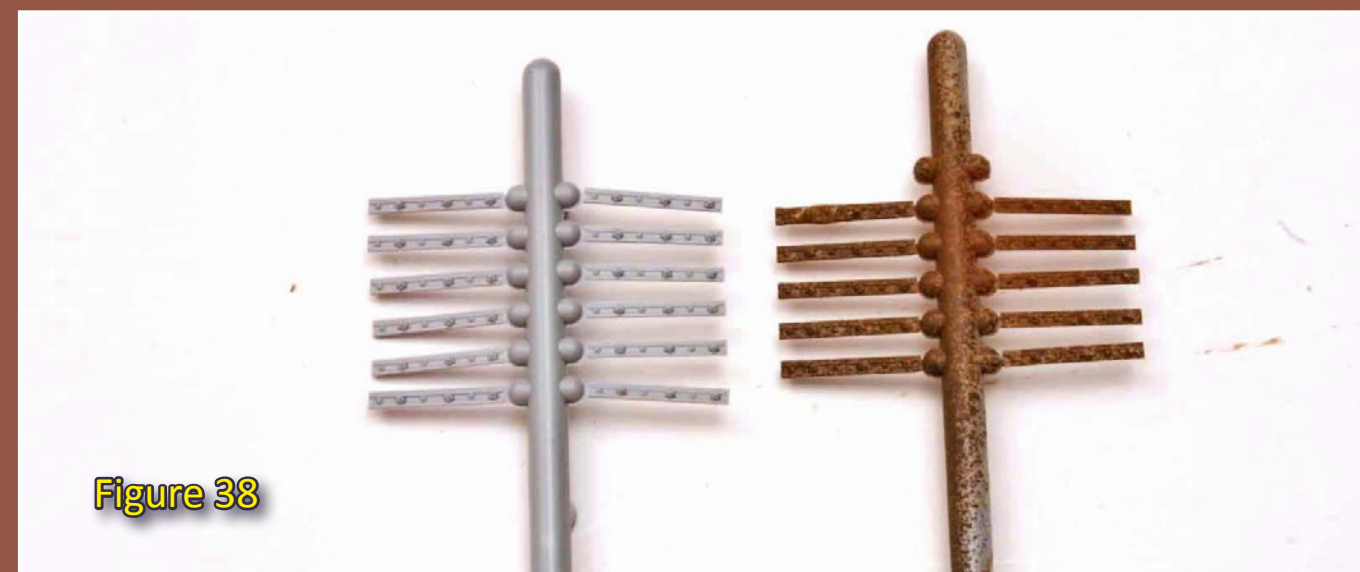


Figure 38

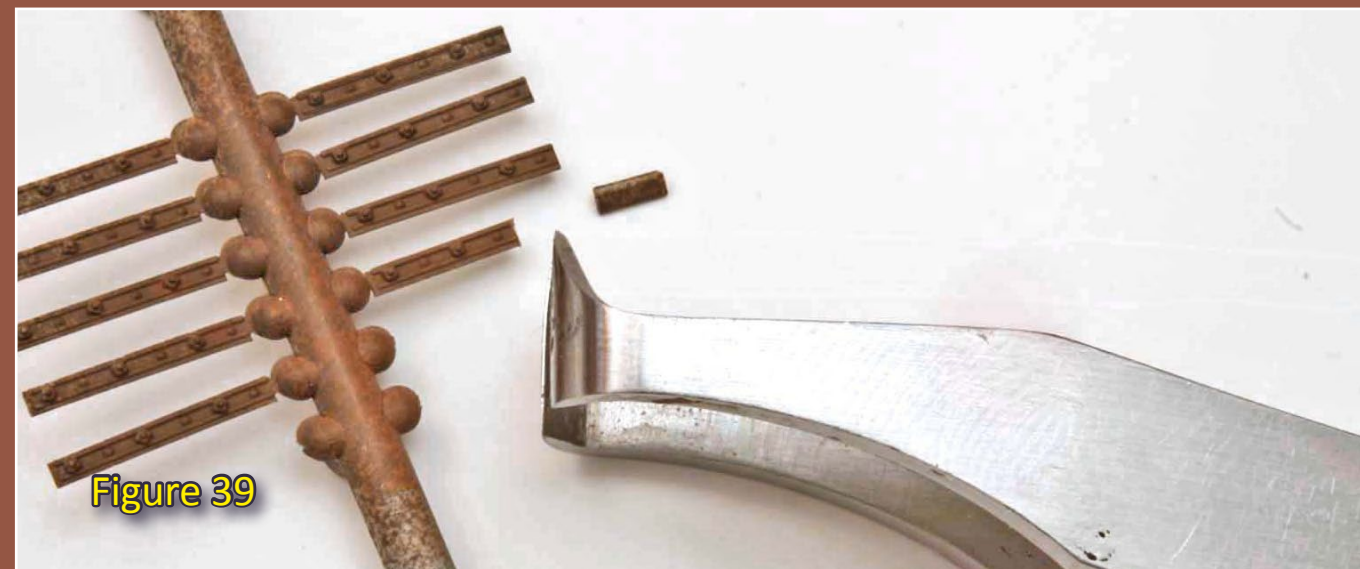


Figure 39



Figure 40

STEP 11: Applying Rail Joint Bars *Continued ...*

Figure 41: I use a toothpick to place a little super glue on the side of the rail.

Figure 42: Using nippers, I remove a bar from the sprue.

Figure 43: I place the bar with tweezers into the glue.

When placing the joint bar, I make sure that an equal number of bolts are on either side of the joint notch in the railhead (Figure 43).



Figure 41



Figure 42



Figure 43

STEP 11: Applying Rail Joint Bars *Continued ...*

Figure 44: The joint bar is in place.

Figure 45: Applying Rail Brown paint to the joint bar.

Figure 46: The trackwork is now ready for ballast.

Figure 44 clearly shows a correctly placed bar with an equal number of bolts on with side of the cut rail. For locations where there is a model track rail joiner, I resize the joint bar cutting above and below the bolts, then use a file to trim to fit.

With the Joint bars in place and the glue set, I get out my Floquil Rail Brown paint marker, Figure 45, and make a quick pass on both sides of the rail. I later apply more weathering to the rail, but this is a good base coat.



Figure 44



Figure 45



Figure 46

STEP 12: Blending the Track Subroadbed Into the Scene



Figure 47: Any base ground cover will do; I prefer dirt. I sift the material to remove any out-of-scale pieces and also use a strong magnet to remove any small iron or steel particles.

Figure 48: Using a brush, I apply latex house paint in a color that matches the base ground material color. I work in small areas, as I need the paint to still be wet so the dirt will adhere.

Figure 49: With the paint still wet, I sift on the dirt. I am not worried about getting too much, I just move it around with a dry brush. I can always sweep or vacuum off the excess before final gluing.

Properly applied ballast and subsequent roadbed detail is what can make your trackwork stand out with extra realism. I work from prototype images to help me get the right look with my track.

I lay down a base coat of dirt near the track. Read dirt is virtually free – I sift and size-sort it for my needs. Whatever material you use, just make sure it is right for the area being modeled.



Figure 50: With the ground cover in place, I use a spray mister to wet the ground with a special wet water mix of 70% rubbing alcohol and water 70:30 (alcohol to water). The goal is to thoroughly wet the material. We want no pockets of dry material under the glued dirt.

STEP 12: Blending the Track Subroadbed Into the Scene *Cont...*

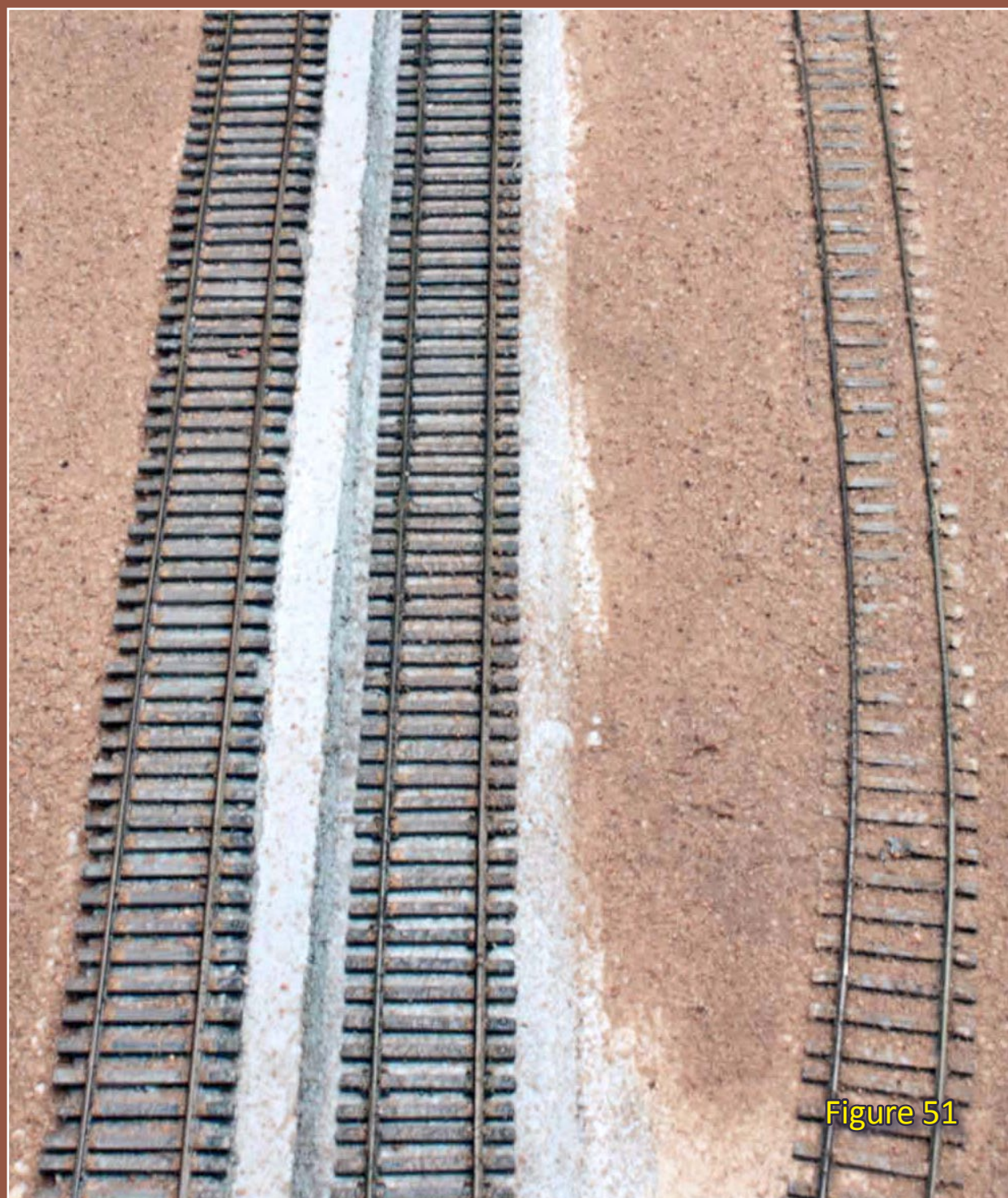


Figure 51

Figure 51: Using a recycled Elmers glue bottle, I mix 50:50 matte medium and water. I then dribble this on the wetted areas being careful again to not over-saturate the area, causing the dirt to wash away.

STEP 13: Applying Ballast

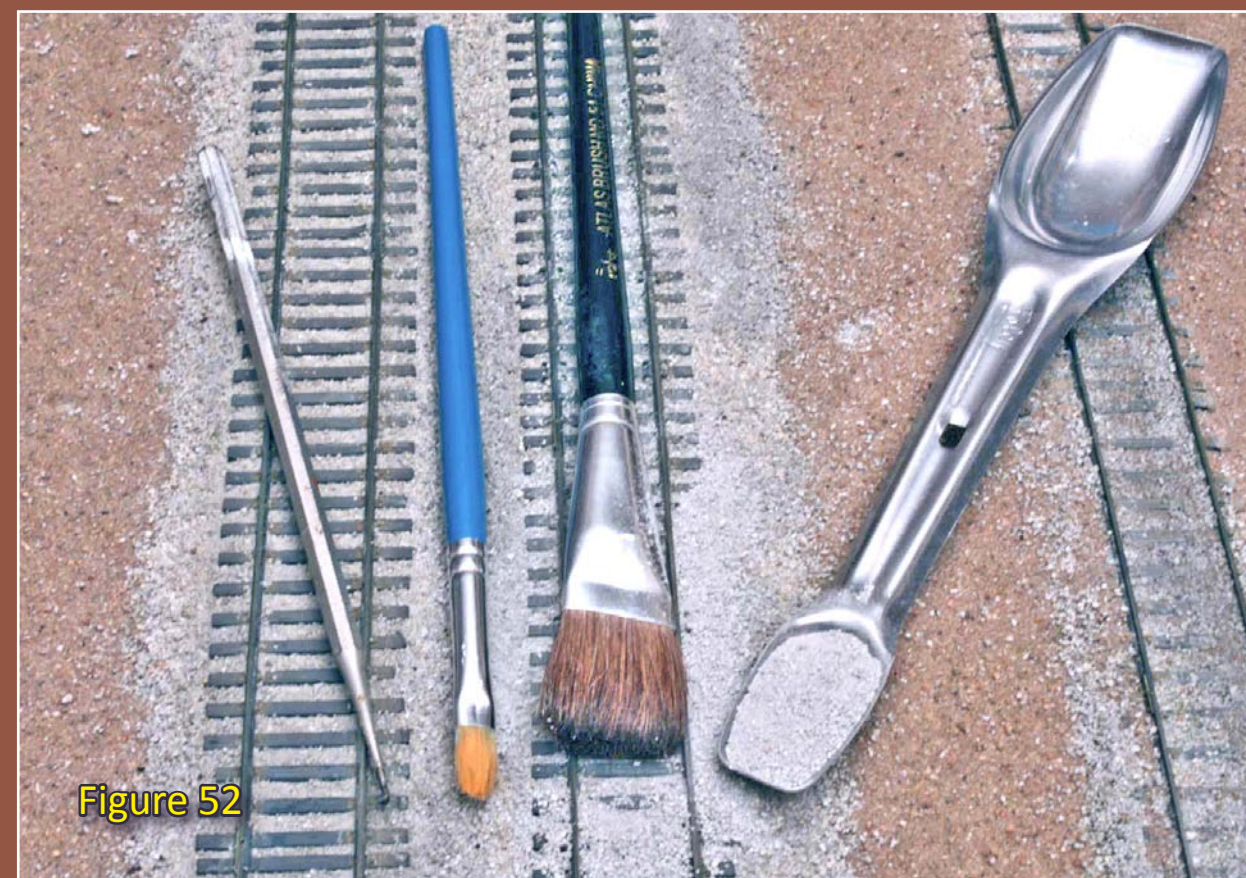


Figure 52

Figure 52: I use a variety of tools to place the ballast including a spoon, a soft brush, a small soft hair brush and a dental pick. Once I have placed the ballast with the spoon, I use the brushes to clear it from the tops of the ties and side of the rail. A dental tool works great to clean off pieces that get stuck behind details or between rails.

Although manicuring the ballast can be time-consuming, the results are well worth it. Taking care now keeps me from having to do a bunch of cleanup after I've fixed the ballast in place.

STEP 14: Weathering the Rail

Figure 56: Ballasted track, ready for the final detailing.

Figure 57: Dry brushing the details to add depth.

With the ballast in place, finally comes final rail weathering. I use the Floquil paint markers to even out any areas that are not covered well or have been scraped off.

I use a mix of craft paints and acrylics with some small brushes to dry-brush rust and brown colors on to the joint bars and rail (Figure 57). By controlling the amount of rust I apply to the rail, I can make the rail look whatever age I need.

If I get too much rust on the rail, I can let it dry and paint over it with the Floquil paint marker, then try again with the rust dry-brushing.

Using a variety of colors keeps the rail from looking painted and looks more like natural rust and age. In Figure 58 (next page) you can see the foreground track is more weathered than the others, making it look like a less-used and older section of track.

Once the paint has dried, I use an abrasive track cleaner and clean the head of the rail. I only clean one rail at a time, holding the pad at a 45 degree angle on the inside of the rail, where the wheels would be and where good electrical contact needs to occur. I make a few passes until I am satisfied I will have good electrical pickup.

Now it's time to test run some trains and enjoy my more realistic looking trackwork!



Figure 56



Figure 57

STEP 14: Weathering the Rail *Continued ...*



Figure 58: You can see how adding more rust or other colors can change the age of the rail. Note the rail in the foreground is less-maintained and looks older, even though all the rail is brand new.

Figures 59, 60: With the trackwork finished, I then am able to blend the surrounding area with scenery.

Figure 61: With the work done, it is again time to get the freight rolling!



MRC/JTT Scenery Products HO Scale Corn Stalks



New HO scale corn stalks ...

– by Jeff Shultz

Model Rectifier Corporation, or MRC, has long been known in the model railroad world for their power supplies and other electrical equipment. Recently they've partnered with JTT Scenery Products, a manufacturer of handcrafted scenery items in all scales from Z to O.

One of the products that they've recently released are HO Scale Corn Stalks, seen here in a 36-count blister package. Individually constructed out of paper-like leaves around a stiff core, the corn stalks are all very close to 1" in height. The tips of the core material are split and painted a dull yellow to



Figure 1: 36 pack of Corn Stalks. 1" tall, 36/pk, Item No. 95511 MSRP: \$7.95. (<http://www.modelrec.com/search/product-view.asp?ID=11803>.)

represent the tassels on top of the stalks. Painting is not necessary, these models are ready for planting straight from the package.

To give an idea of what they'll look like on a model, I made up a very

small diorama out of some pink foam, brown Scenic Express Flock & Turf, and 18 of the 36 corn stalks. I stuck the corn stalks directly into the foam with a set of tweezers – the core is strong enough to punch its own hole in the foam. On a permanent scene, very small holes could be punched in the foam beforehand to ensure that it “grows” in evenly-spaced rows like real corn does.

While corn is believed to have originally developed in Central

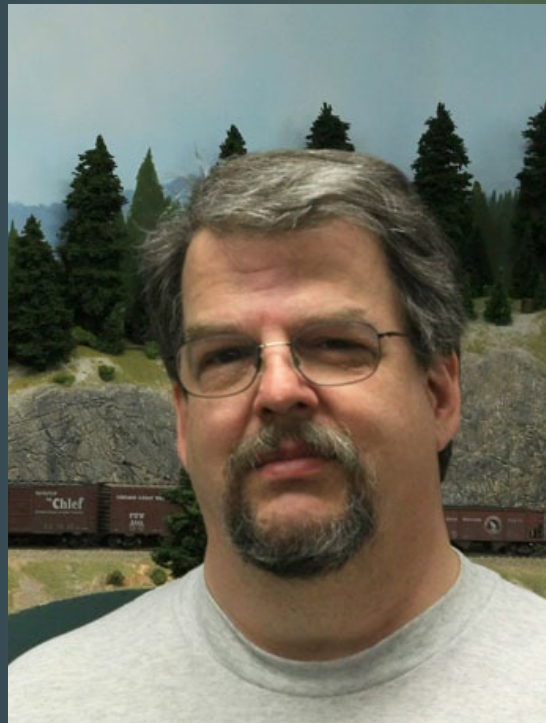
America, it has spread throughout the United States as well as the rest of the world, both for food as well as for fuel. With a growing season from spring to late fall, as well as being grown in everything from home gardens to thousand-acre fields, corn makes an excellent crop to have growing on a model railroad layout. As for this particular corn, it's going to end up in the backyard garden of a farmhouse in the mid-Willamette Valley of Oregon.



Figure 2: 18 stalks arranged in a field-like setting.



About our layouts columnist



Charlie Comstock is our layouts editor and columnist.

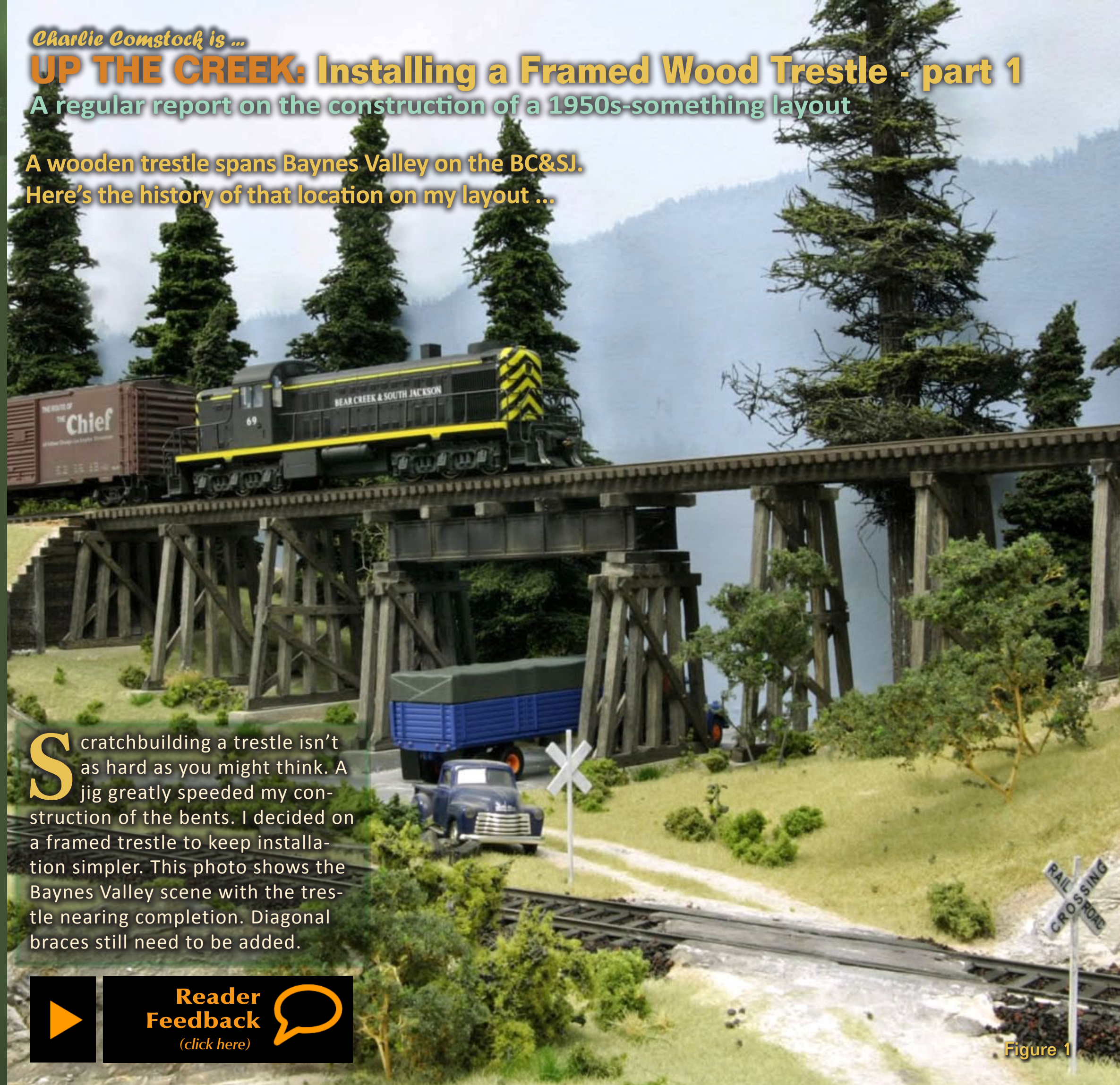
[Click here](#) to learn more about Charlie.

Charlie Comstock is ...

UP THE CREEK: Installing a Framed Wood Trestle - part 1

A regular report on the construction of a 1950s-something layout

A wooden trestle spans Baynes Valley on the BC&SJ.
Here's the history of that location on my layout ...



Scratchbuilding a trestle isn't as hard as you might think. A jig greatly speeded my construction of the bents. I decided on a framed trestle to keep installation simpler. This photo shows the Baynes Valley scene with the trestle nearing completion. Diagonal braces still need to be added.

 **Reader Feedback** 
(click here)

Figure 1

Preparing for the Trestle

I built the future Baynes Valley area on my Bear Creek and South Jackson layout using joists projecting from the wall. The joists are glued and screwed to 2x2 cleats which are screwed to the studs behind the drywall with 3" deck screws (figures 2 and 3).

I believe that rigidity of the roadbed around a bridge is paramount. If the ends of the roadbed have any flexibility track can kink and hard-to-fix derailments due to track misalignment can occur. Before I cut a chunk out of my roadbed I want some significant bracing in place. My friend Terry is convinced that I overbuild my benchwork, but this is one place where excess strength seems like a good idea.

For this bridge I screwed a $\frac{3}{4}$ " plywood base plate to the tops of the joists and connected it to the risers and the spline roadbed using gussets and contour plates (figures 4 and 5). I used yellow glue except on the joint between the gussets and the roadbed where I slathered on construction adhesive before pressing the gussets into place. The result is a very strong box structure that resists tipping, twisting, and diverging forces. Plus the 6-ply masonite splines don't easily deform from their as-glued shape and I don't expect to have trouble with the roadbed ends coming out of alignment!

After installing the bridge and bracing I built up the basic scenery contours using rigid extruded Styrofoam

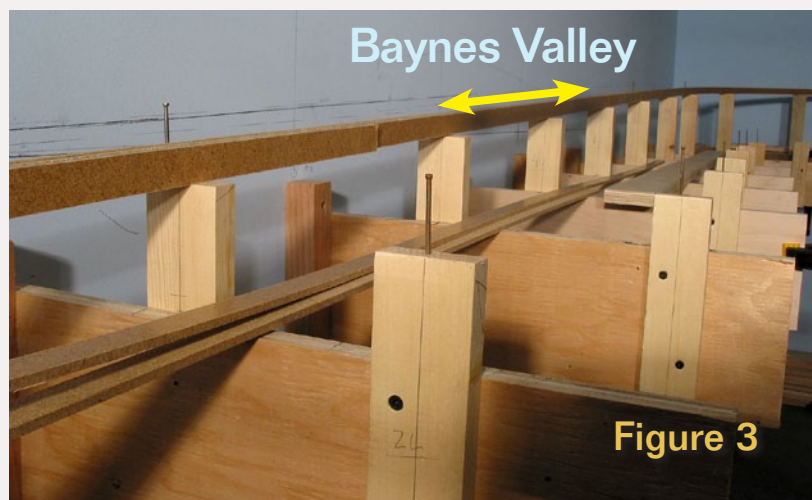


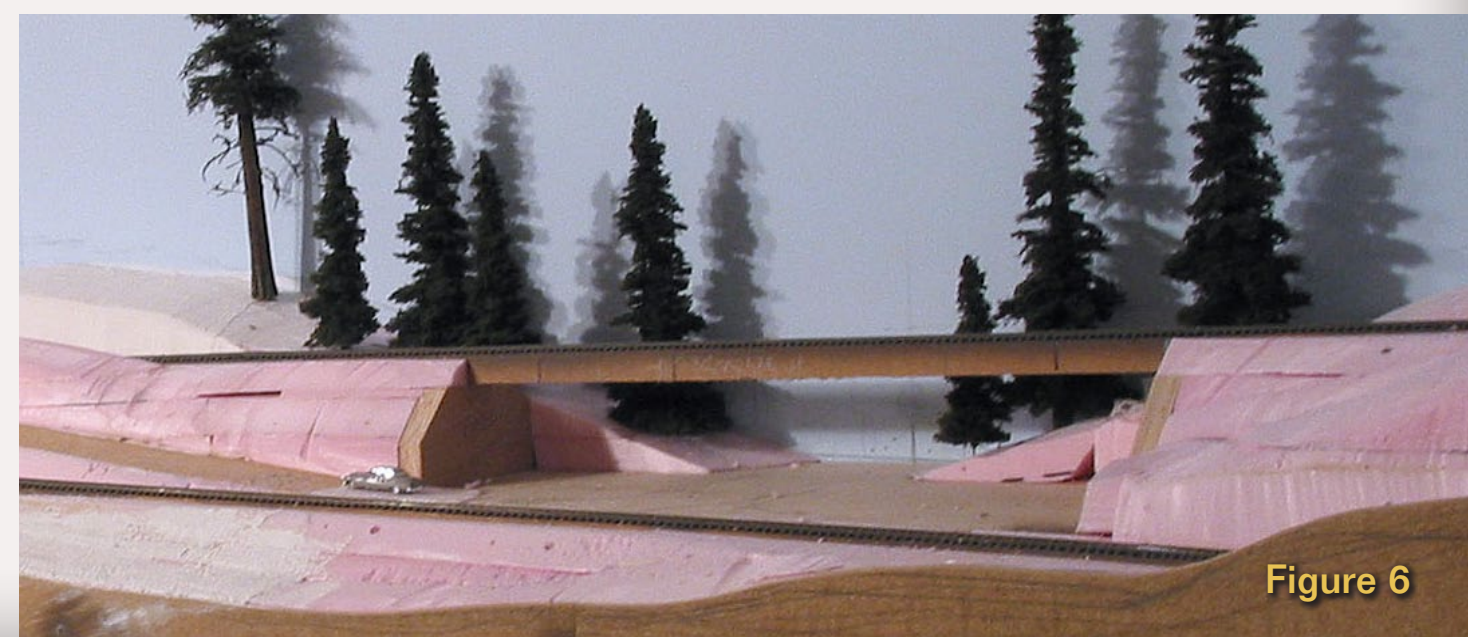
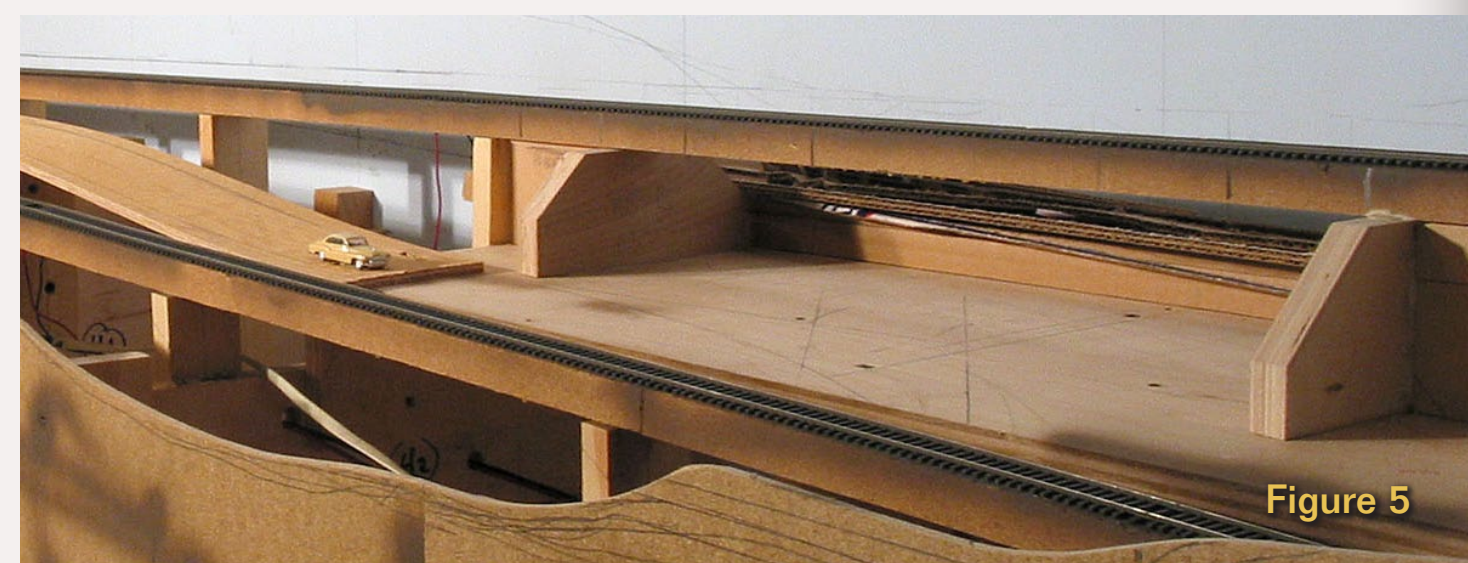
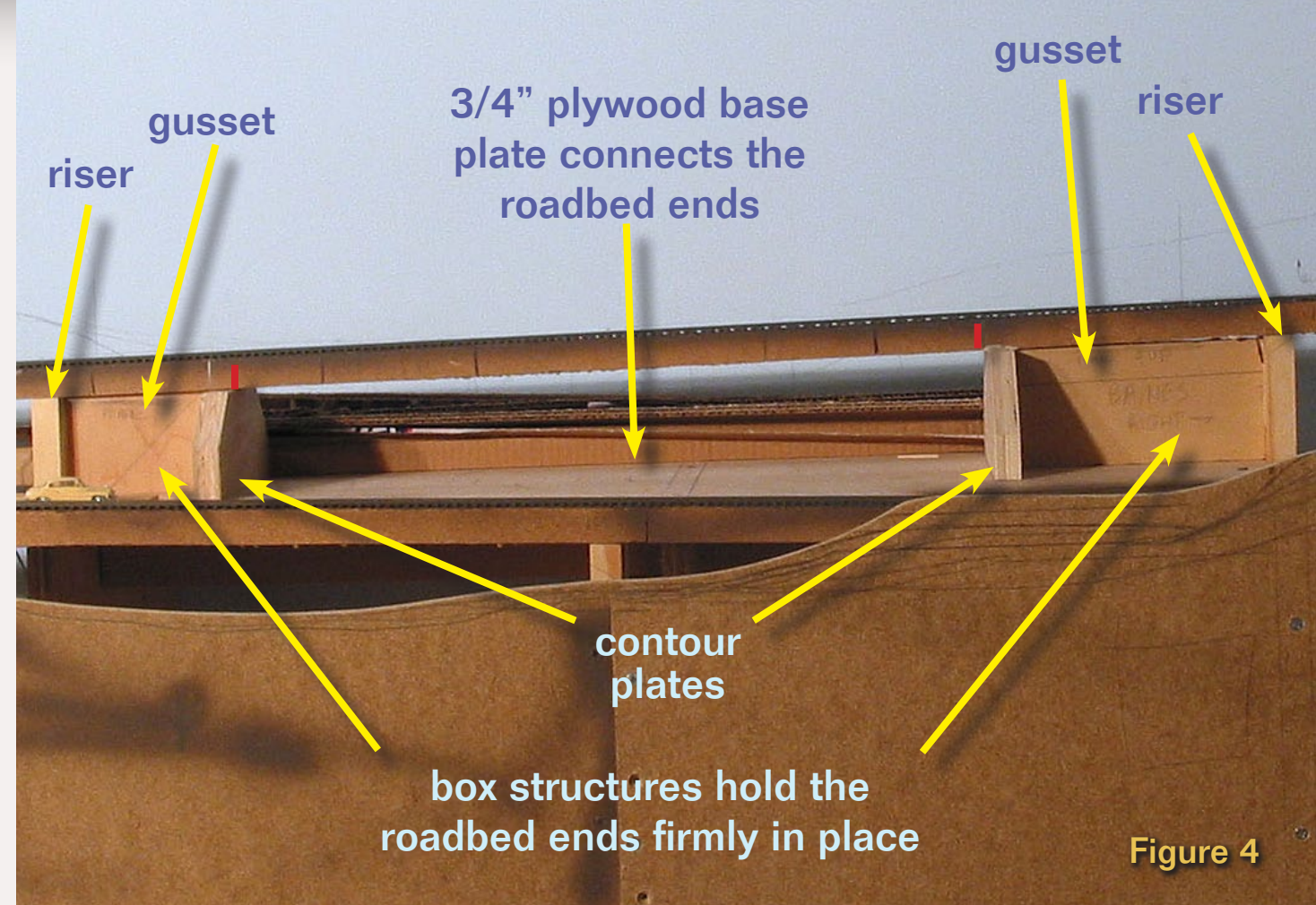
Figure 2: Joists and risers to support the main track are in place. Spline roadbed construction has begun.

Figure 3: Risers for the Deschutes branch (right) are in place. The yellow arrow shows the future home of Baynes Valley. I'll install a plywood base plate connecting it to the three joists under the trestle.

Figure 4: I braced the ends of the (future) bridge to keep the roadbed in place after the cuts (red lines) have been made. The resulting box structure is very strong.

Figure 5: You can see the $\frac{3}{4}$ " plywood bridge base plate more easily in this photo.

Figure 6: I built up scenic contours next to the bridge using pink (and gray) extruded foam insulation.



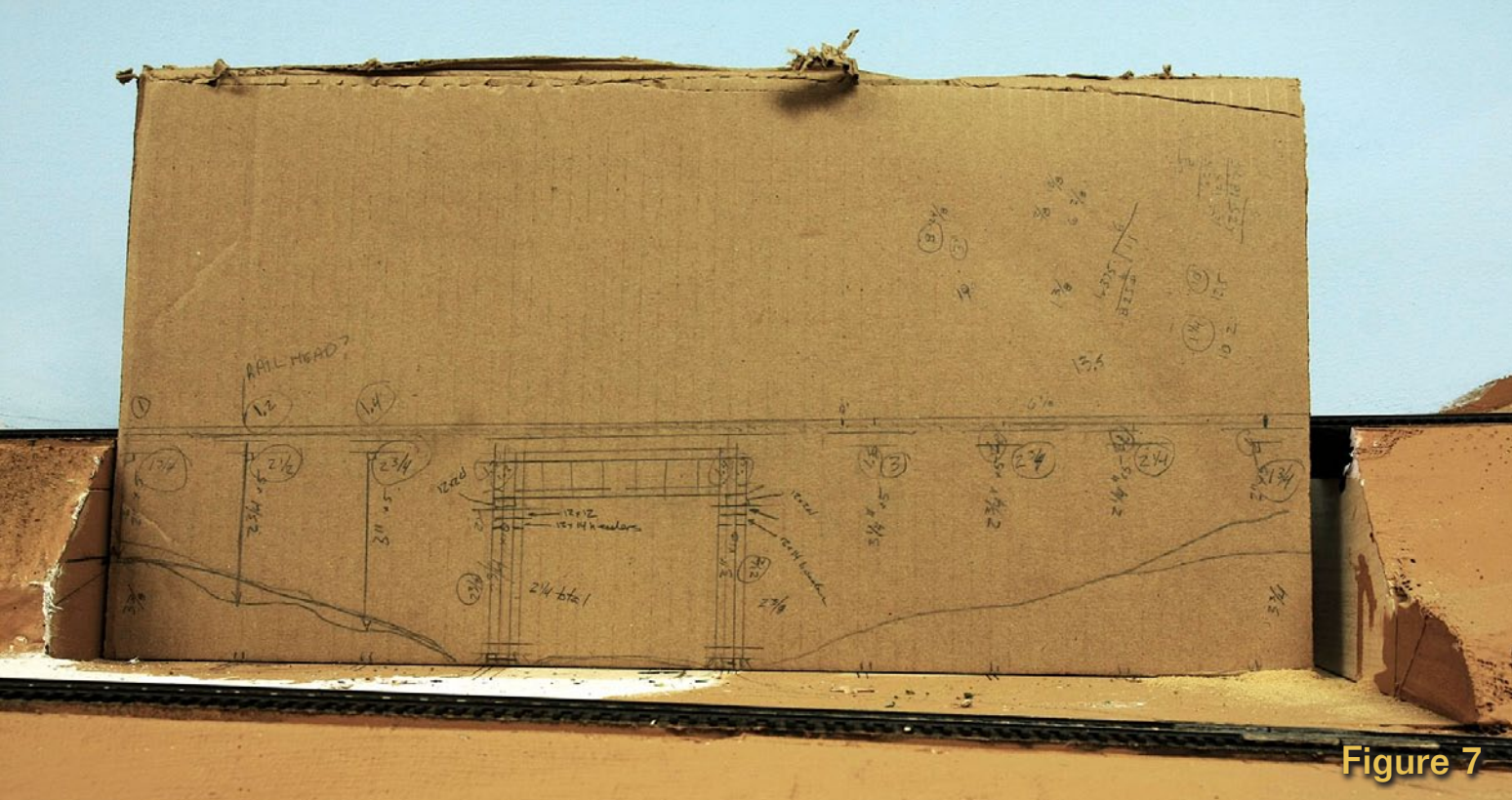


Figure 7

hot-glued in place and carved with a hot wire cutting tool.

Building the Trestle

I used *Paul Mallery's Bridge and Trestle Handbook* from [Carstens Publications](#) as my information source for trestles.

I planned Baynes Valley to have a road running beneath the tracks. The trestle will be framed – each of its bents will be constructed of square cross section posts that will rest on a timber sill supported by a concrete foundation. I decided to use a [Micro Engineering 30' girder bridge](#) to span the road with double bents under each end of the girder.

Before I started building, I cut a piece of cardboard to fit in the bridge opening and drew the bridge and ground contours on it. This let me work out the bent spacing and heights in advance (figure 7).

I selected 12"x12" stock for the posts and mud sills with 12x14" caps and

4"x10" sway bracing. I picked 12"x20" for the deck beams with 4"x10" diagonal bracing because I had some on hand.

Making a Bent Jig

It's important to use different materials for the jig and trestle. A wooden trestle bent is easily glued to a wooden jig. Conversely a styrene bent will almost certainly get glued to a styrene jig. I was using wood for my bridge, so I chose styrene for the jig.

The first step in making my trestle bent jig was 3rd PlanIt. I printed out a full size template for the bents and taped it to a piece of .060" styrene. You could hand draw a template, but the computer makes it fast and precise. I pressed an X-acto blade through the paper to mark the location of the various trestle members. I removed the paper and rubbed each X-acto blade impression with a pencil, then smudged them with a finger, so I could easily see where the marks were. Then I used a straight edge

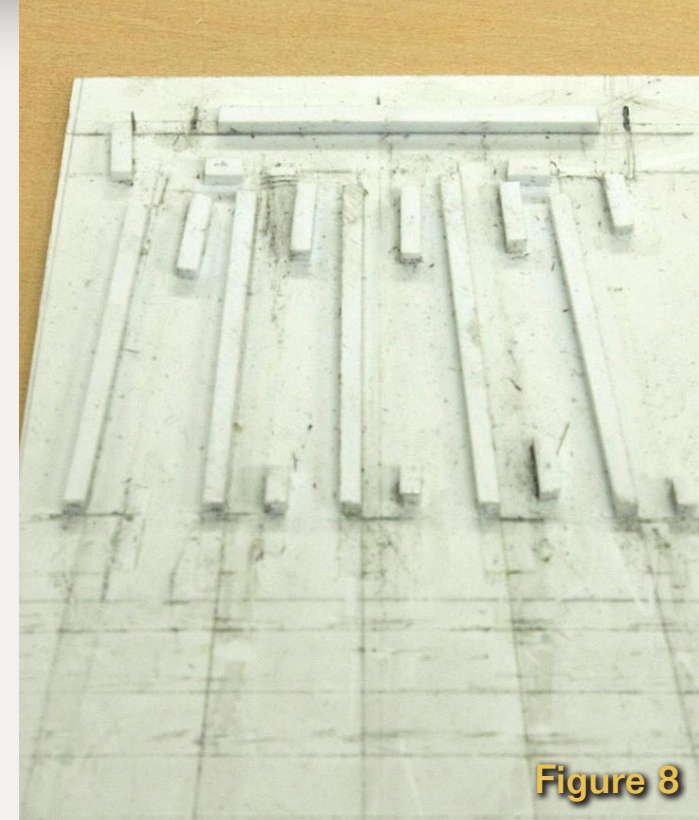


Figure 8

and carefully marked one edge of each piece of wood.

Next, I glued some 1/8" x 1/8" styrene square stock in place next to the lines I'd drawn. I put a piece of the proper size wood in each space in the jig, then added another piece or two of 1/8" x 1/8" styrene square stock so each bent member would be held securely. Making the jig this way results in correct spacing of the guide pieces (figure 8). I also marked the jig with lines for the height of each bent (taking this information from the cardboard template – figure 7). Now it was time to build some bents.

I distressed the wood with the blade of a razor saw to bring out the grain and stained it with India ink and alcohol before I started cutting.

I cut a cap from 12"x14" stock and placed it in the jig. Then I carefully cut the ends of five pieces of 12"x12" stock to the proper angles for each of the five posts. I try to make this joint fit perfectly but I don't cut the posts to length

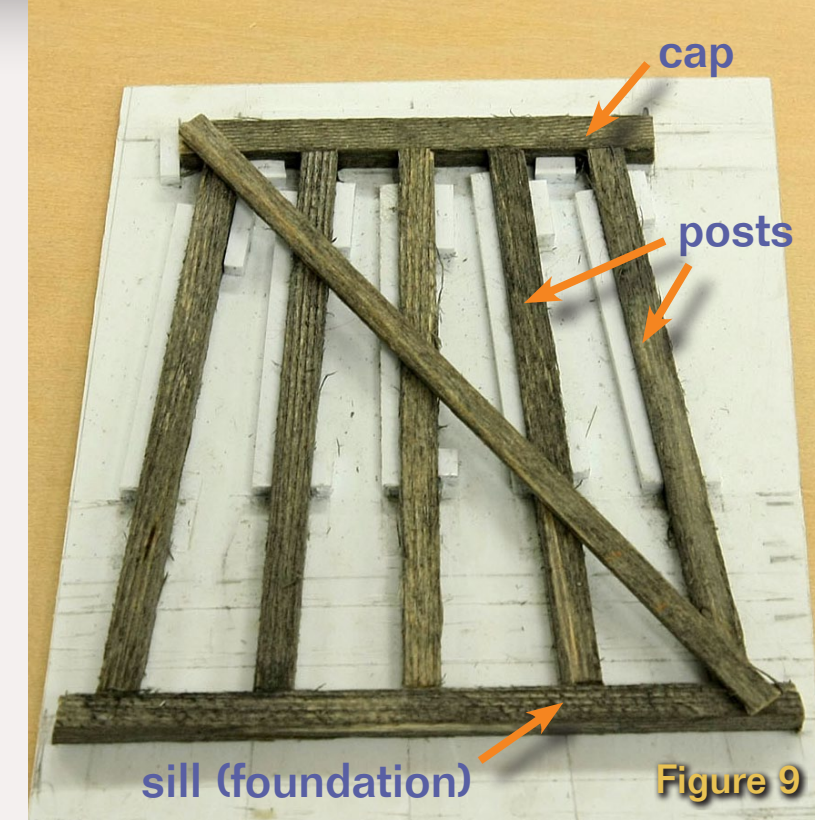


Figure 9

Figure 7: Cardboard trestle pattern in Baynes Valley.

Figure 8: My bent assembly jig. The horizontal lines mark the lengths of the different bents.

Figure 9: The jig with a bent under construction.

yet. When I'm satisfied I put a drop of yellow glue on the top of each post using a toothpick and place the posts in the jig, pressing them tight against the cap. I used a razor saw to cut all the posts to length, pressing down hard on the posts to keep them from moving around. Then I make a sill (foundation) piece and glue it in place.

Finally I cut a sway (diagonal) brace to length for the bent and glued it in place. I let the glue set for 10 minutes, then gently pried the new bent out of the jig. I turned it over and glued another sway brace on the opposite side of the bent making an "X".

After the glue dried completely I drilled holes through each sway brace where it crosses the posts, cap, and sill members and added NBW (nut-bolt-washer) castings that I pre-painted roof brown to simulate rust.

Trestle Assembly

With the bents built I started building the trestle deck. I marked a piece of flat, smooth plywood (figure 10) with where the longitudinal stringers and bents would go. I also marked where diagonal braces will go between the bents. I used 12"x20" wood for the stringers and 4"x10" for the diagonal bracing.

This trestle is too long for a single piece of strip wood to reach the entire length. Since I'm putting two stringers under each rail, I laminated the pieces using yellow glue and staggering the joints. I used double-sticky tape to hold the stringer assemblies in place on top of the plywood template base. With the stringers in place I added the diagonal bracing between the two stringers.

Then I carefully placed the bents on the stringers being sure I had them in their correct places and aligned vertically. Size matters here! Note the wood block at the end of the trestle does NOT have a vertical surface. The trestle is on a 2% grade and the block has a corresponding slant letting me align the bents so they'll be plumb when the trestle is installed.

I also attached the 30' plate girder bridge section using five 12"x12" 'caps' to spread the load.

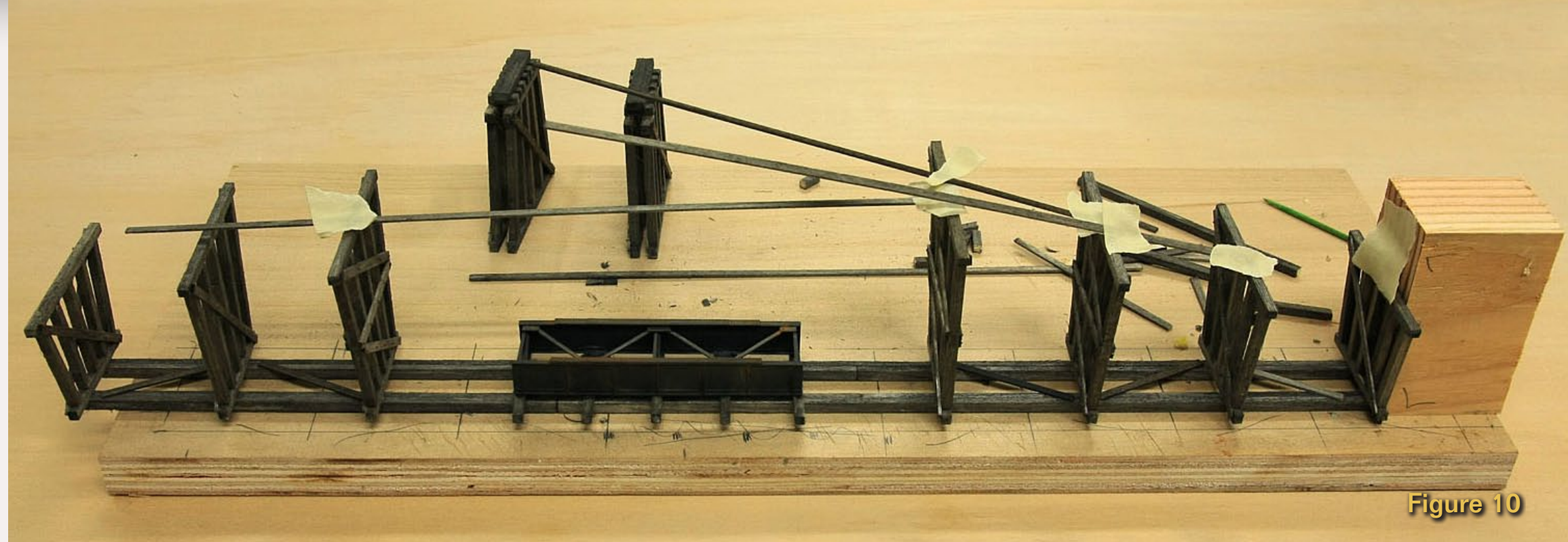


Figure 10

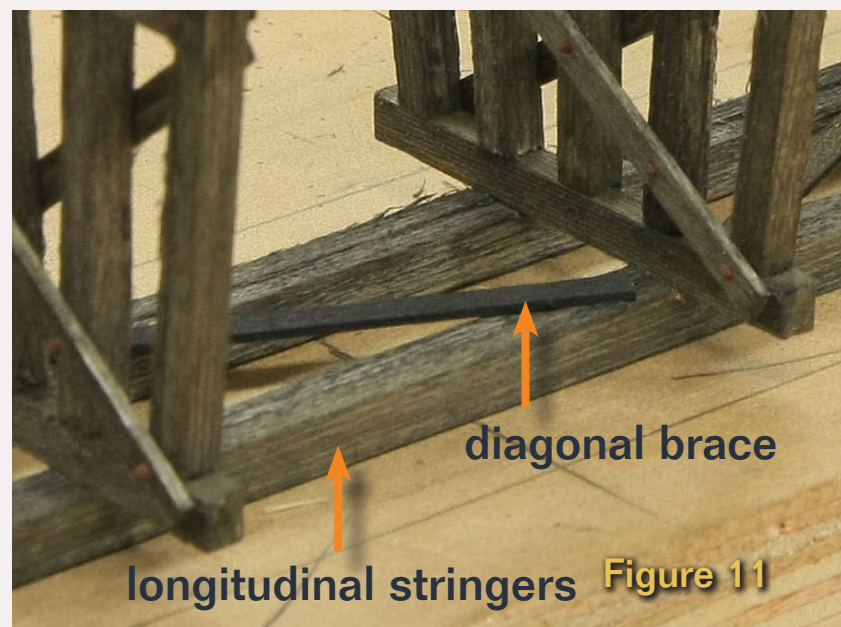


Figure 11

I've not glued any ties in place since I'll be using to use a section of ME code 83 bridge flex track on top of this trestle.

Rough Installation

Now it's time to pull out the saw and cut away the spline roadbed to make space for the trestle (figures 13 to 15). I carefully measured the length of the bridge, twice, before making any cuts. It was a good thing as the bridge is considerably shorter than the 'open space' (figure 14). Note the roadbed

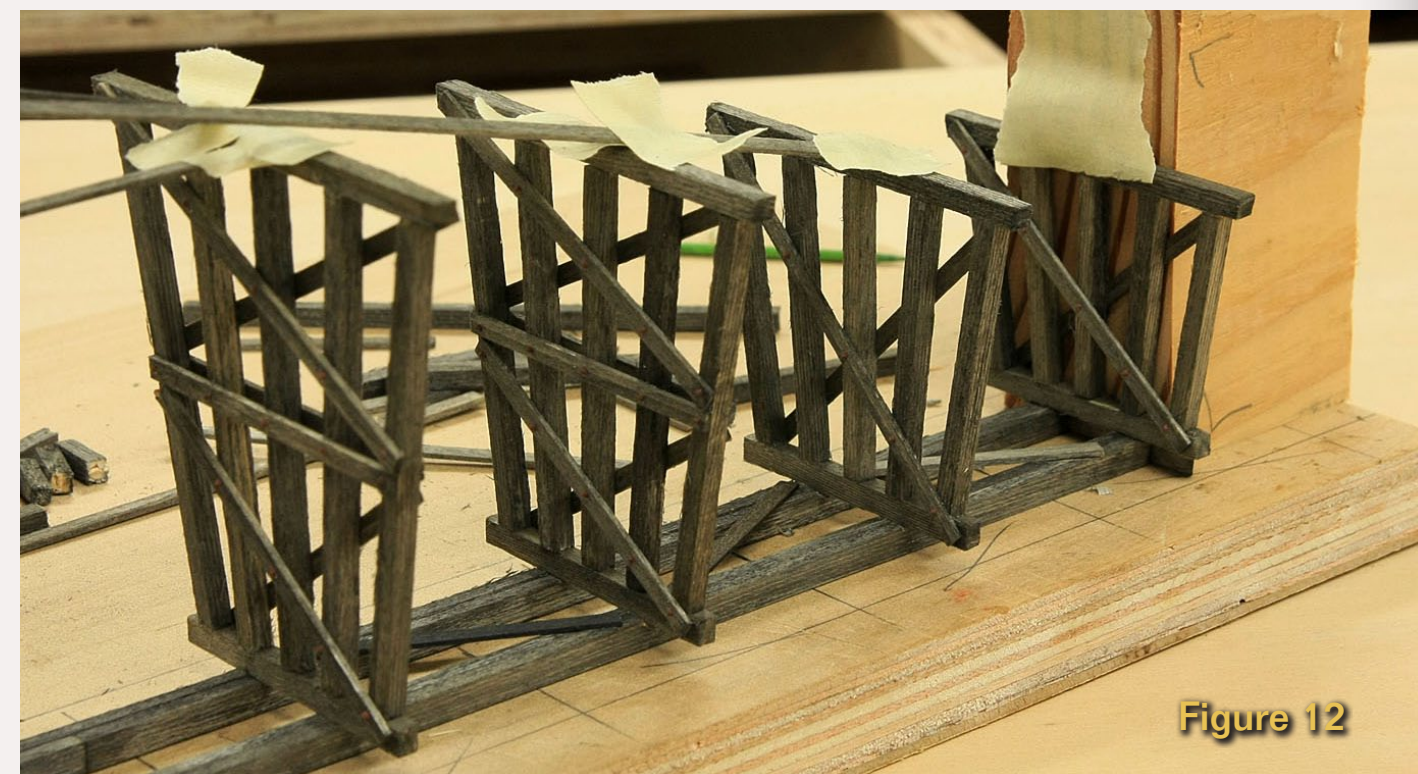


Figure 12

Figure 10: I used this piece of flat, smooth, 3/4" plywood as a base for assembling the trestle. I drew guide lines on the plywood to show where the pieces of wood belonged. Note the doubled bents to support the steel girder.

Figure 11: A close up showing the diagonal bracing under the longitudinal stringers.

Figure 12: The block at the end is NOT vertical. The bridge is on a 2% grade, so the block has a matching slant so the bents will hang vertically below the sloping deck. I held the bents in place with some scrap wood and tape while the glue dried.

Figures 13-15: Cutting away the roadbed for the trestle.

Figure 16: Test fitting the trestle.

Figure 17: Dealing with the protruding nub of roadbed at the right side of the trestle cut.

Figure 18: The trestle with supports under the bents and bridge track on top.

was cut at the right end a bit over an inch from the contour plate.

I test fitted the bridge to be sure I had the cuts far enough apart. After a bit of sanding, it looked good (figure 16).

I solved the protruding roadbed problem by making another contour plate and gluing it in place (figure 17).

None of the bents reach all the way to the plywood base (figures 2 and 3). Figure 18 shows the supports I added. I ripped poplar lumber to about $\frac{5}{16}$ " thick. I laid the pieces on their sides and marked them for height. After a lot of back and forth between the layout and the table saw and belt sander I had supports for each of the bents. With a piece of Micro Engineering code 83 bridge track on top of the stringers it was looking a lot like a trestle!

What's next

Next month I'll start installing the scenery around the trestle.

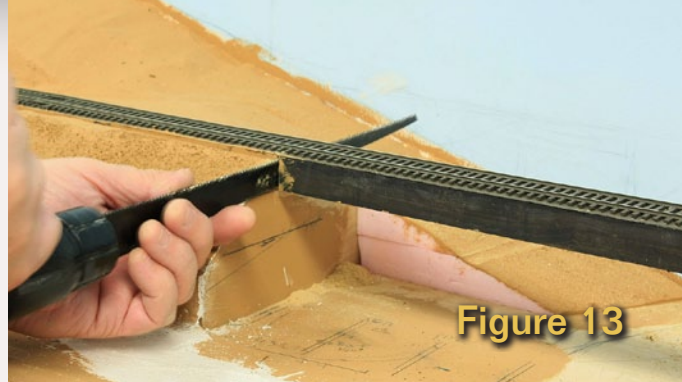


Figure 13

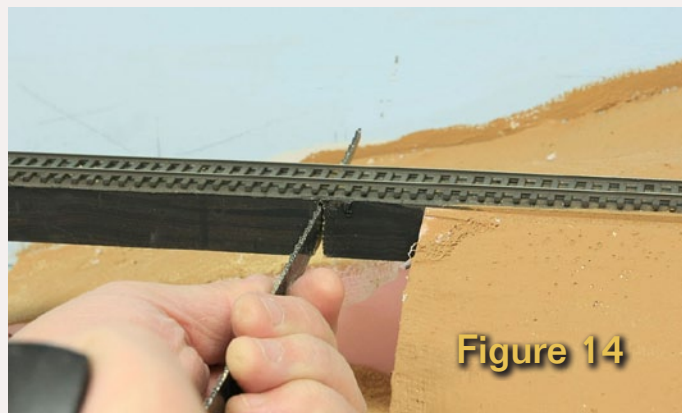


Figure 14



Figure 15



Figure 16



Figure 17



Figure 18



MY MODULAR ADVENTURE: Having fun a module at a time

The ongoing story...



Painting, bricklaying, lighting and building the machine shop and roundhouse

In my last column, I covered the track and the details that I needed to complete before I could start the assembling the roundhouse. I tackled the assembly, but to my surprise I found a few steps I'd omitted. Oops, I'll be talking about those steps in this column.

Before I started assembly one little thing bothered me – interior lighting. How was I going to light the inside without a bunch of

unsightly wires running all over the place? As usual, I slept on it while waiting for my muse to enlighten me ... it took awhile but I finally came up with a solution. This would need to be implemented before any assembly could take place.

As usual, for those who have been following my column, you already know that with me things aren't always simple, so here goes. I hope you enjoy.



Figure 1: Test fitting the machine shop walls.

About our Modular columnist



Les Halmos has been a model railroader since 1979. He's been involved with setting modular standards for the NMRA since 1981. In 2001, he founded the Free-Modu-Rail Group and has been active in promoting Free-mo module standards.

[Click here](#) to learn more about Les.

Photos and illustrations by the author unless otherwise credited.

STEP 1: Choosing lighting components

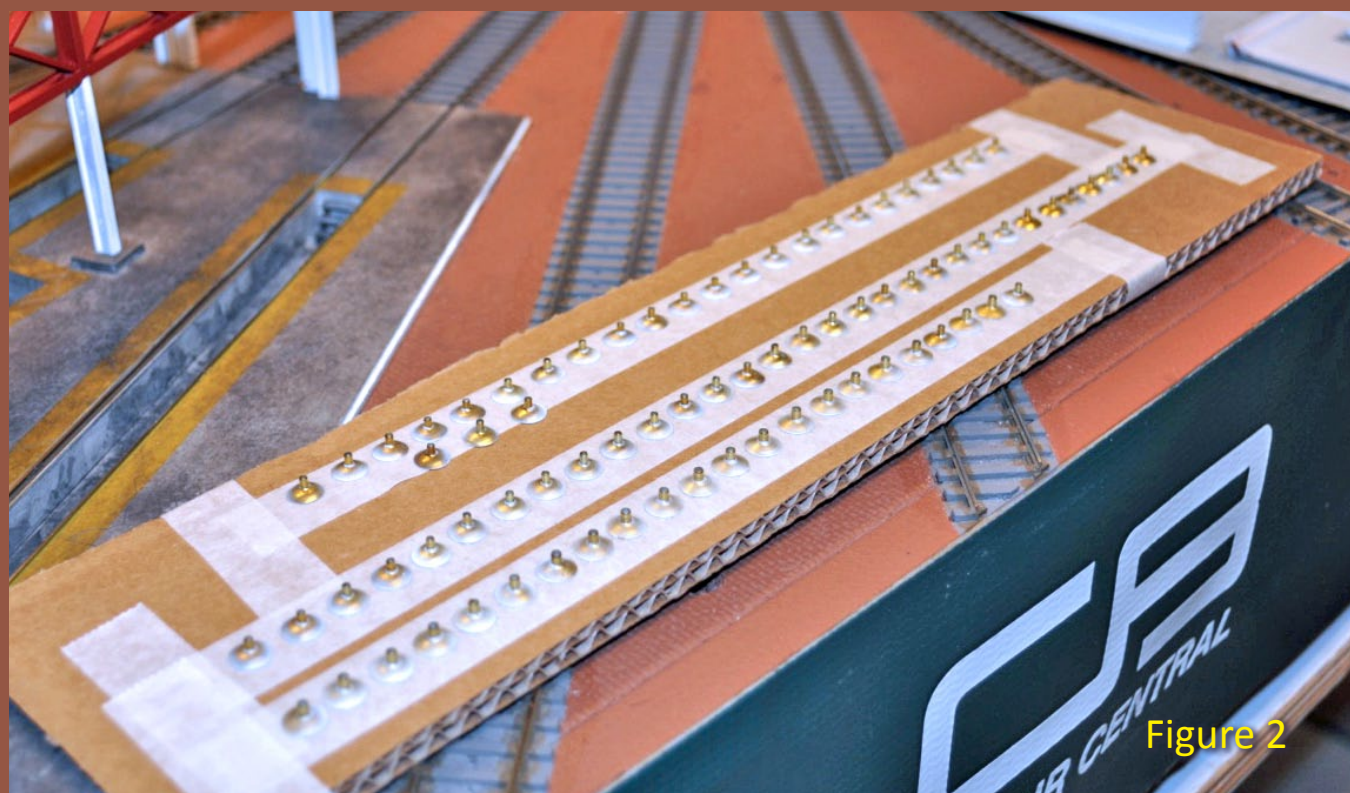


Figure 2

Figure 2: Here are some Campbell lamp shades that I've had sitting around for a while. I figured they would do fine for what I needed. They are a scale 24" in diameter making them suitable for an industrial lighting application.



Figure 2a

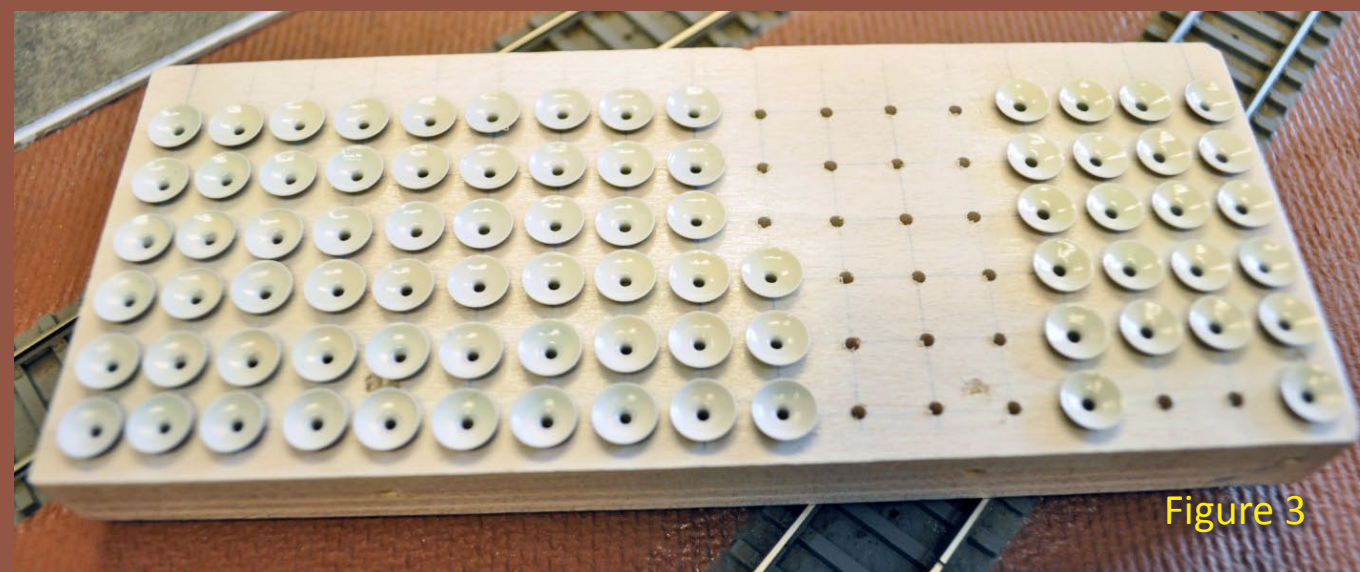


Figure 3

Figure 3: I made a holding jig for the lamp shades to facilitate painting, Murphy reared his ugly head – the ones on the right have slightly larger necks. I drilled slightly larger holes for them in the jig. I painted the underside of the shades Tamiya gloss white.

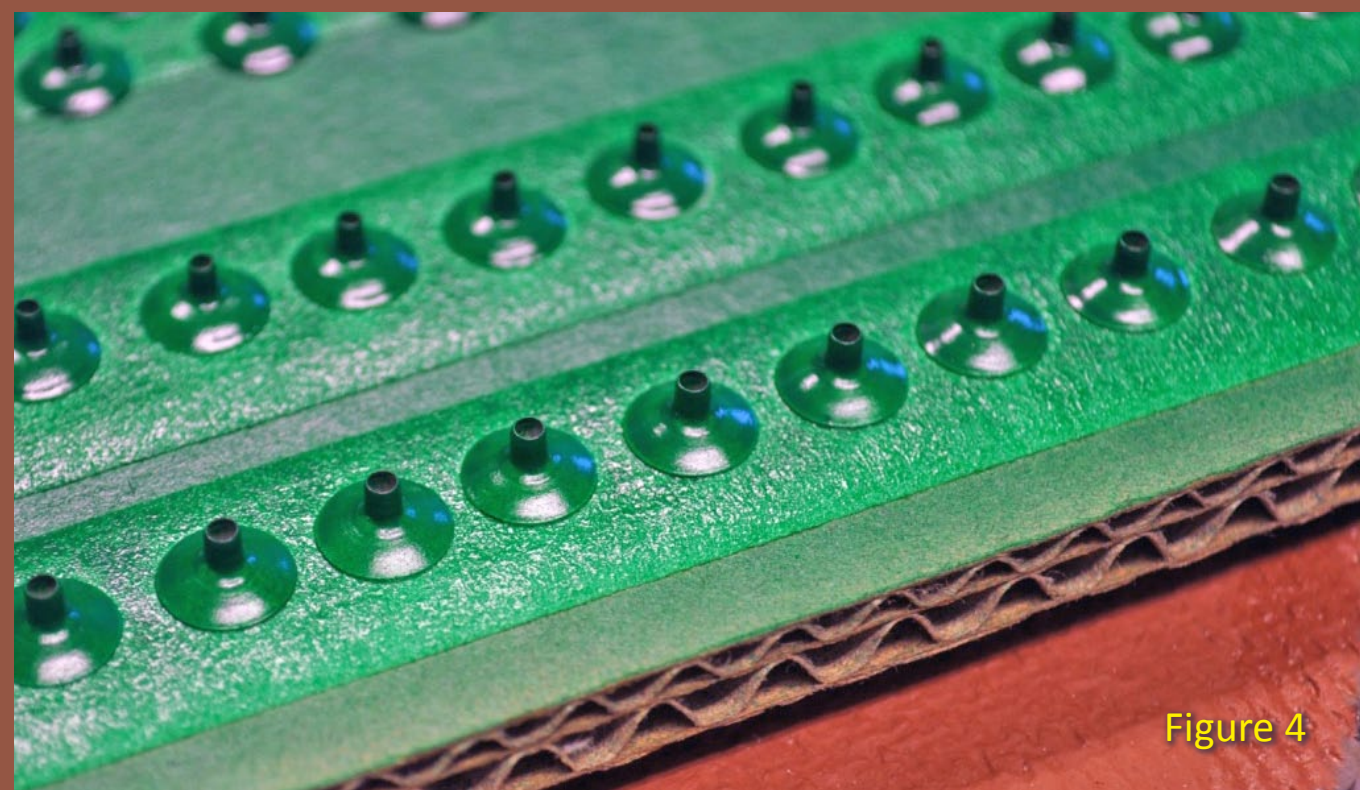


Figure 4

Figure 4: I turned the shades over, stuck them to some masking tape, and sprayed their top sides with Tamiya gloss green.

STEP 1: Choosing lighting components *Continued ...*

Now I had to choose a bulb. Incandescent micro bulbs were too large and looked unrealistic. China to the rescue.

I found a great source on eBay for SMD (Surface Mount Device) LED's for a very reasonable price. This is no longer a secret. Just go on eBay and search for "SMD LED" and you will see what I mean.

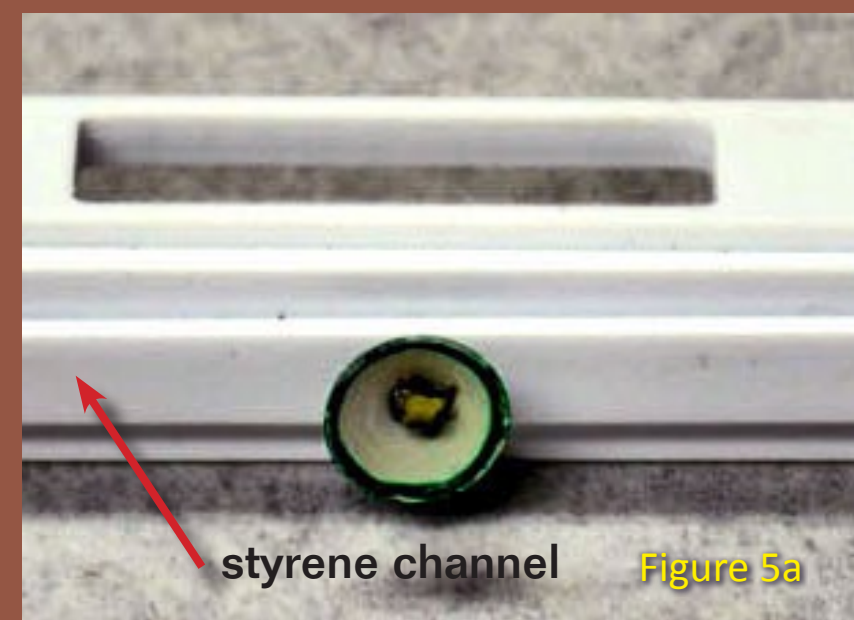
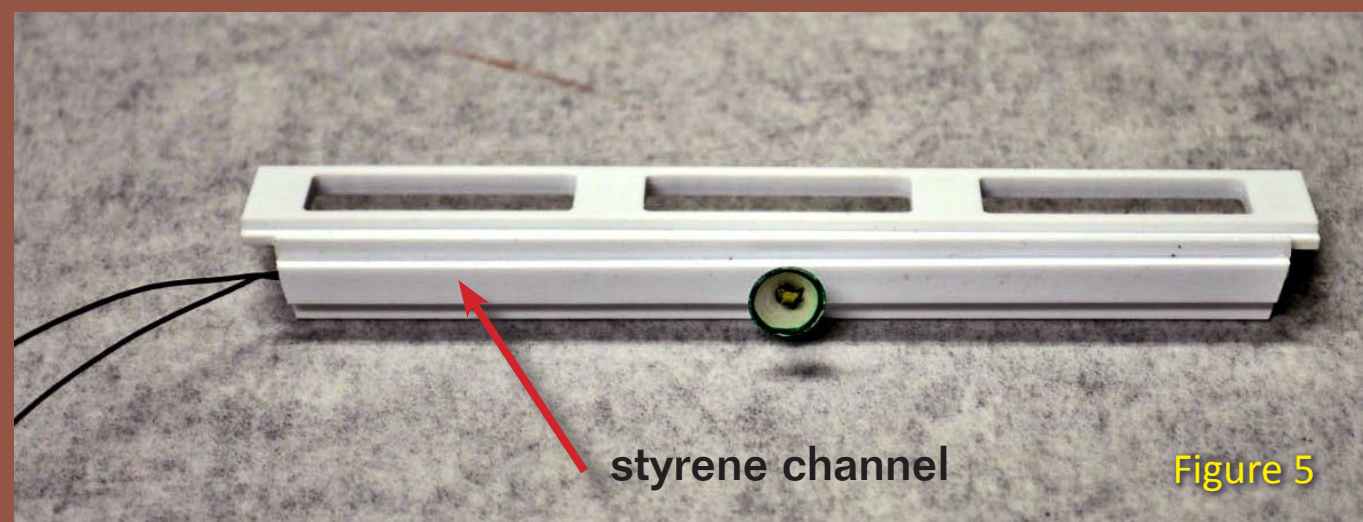


Figure 5: A SMD LED in its lamp shade with hidden wiring. The wires run through the piece of styrene channel added below the window frames.

STEP 2: Modifying the trusses

I had the lamp shades and the lamps. But I needed to figure out how to mount them in the roof trusses while keeping the wiring invisible.

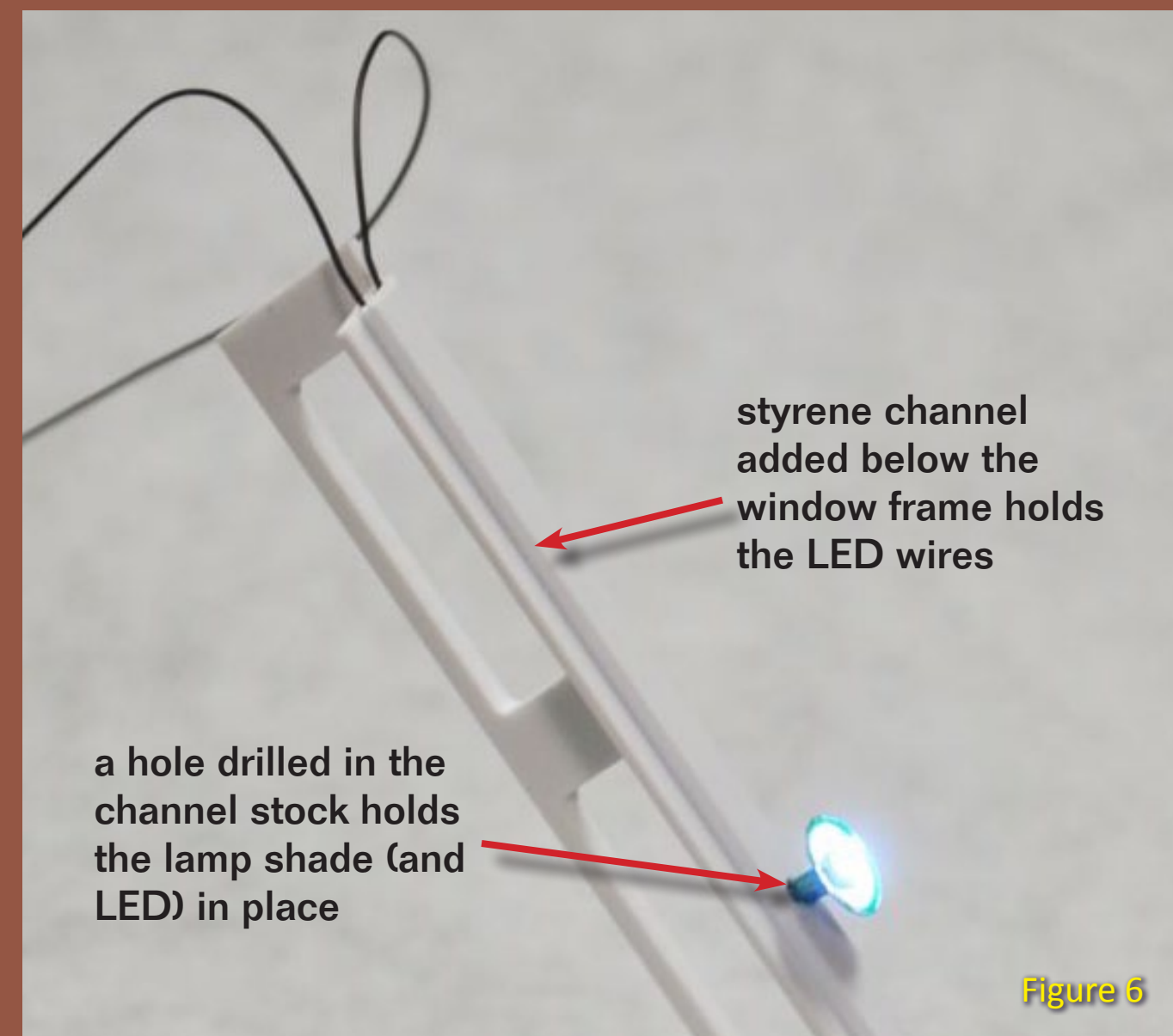


Figure 6: Another view showing the styrene channel stock that holds the wires. Those LEDs are bright!

STEP 2: Modifying the trusses *Continued ...*

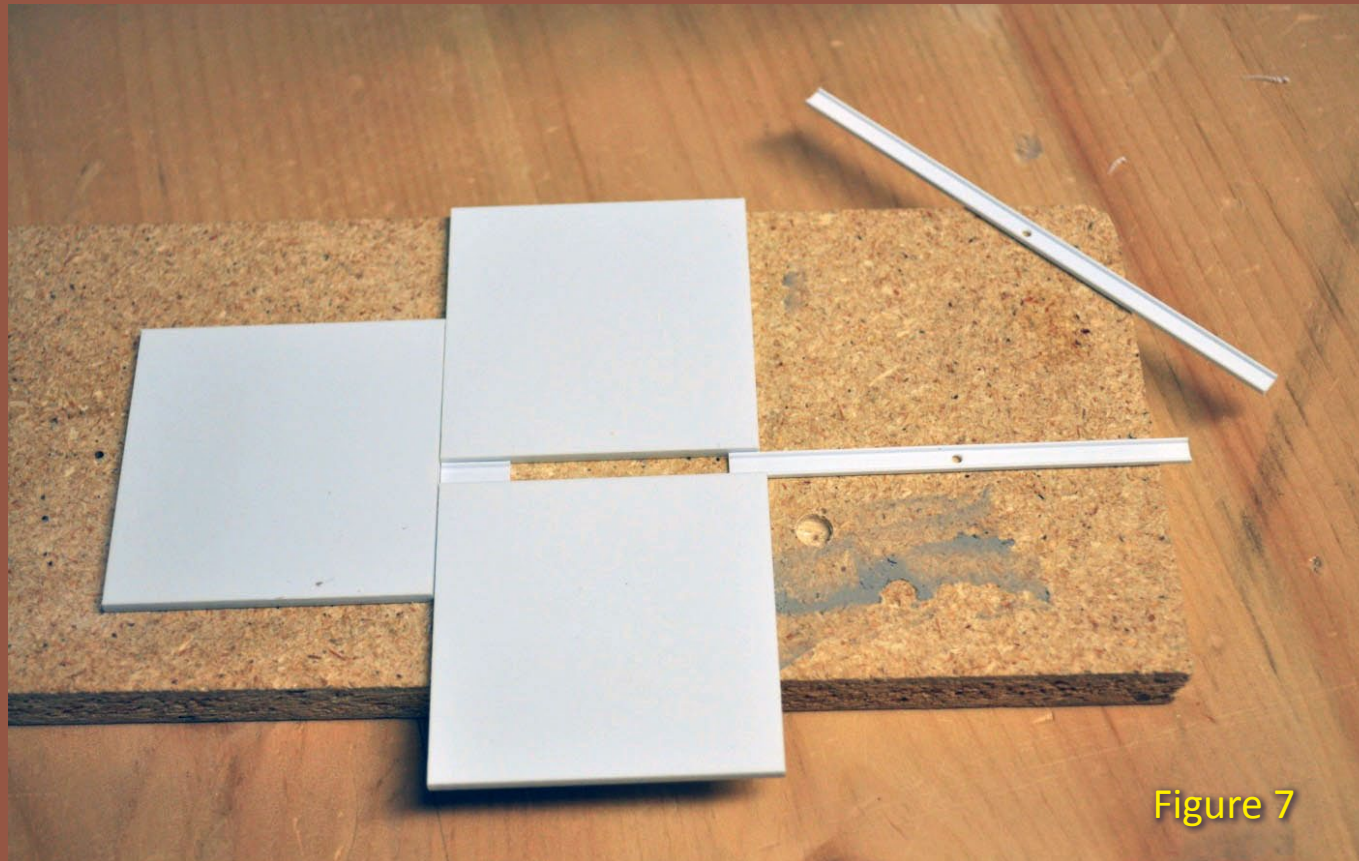


Figure 7

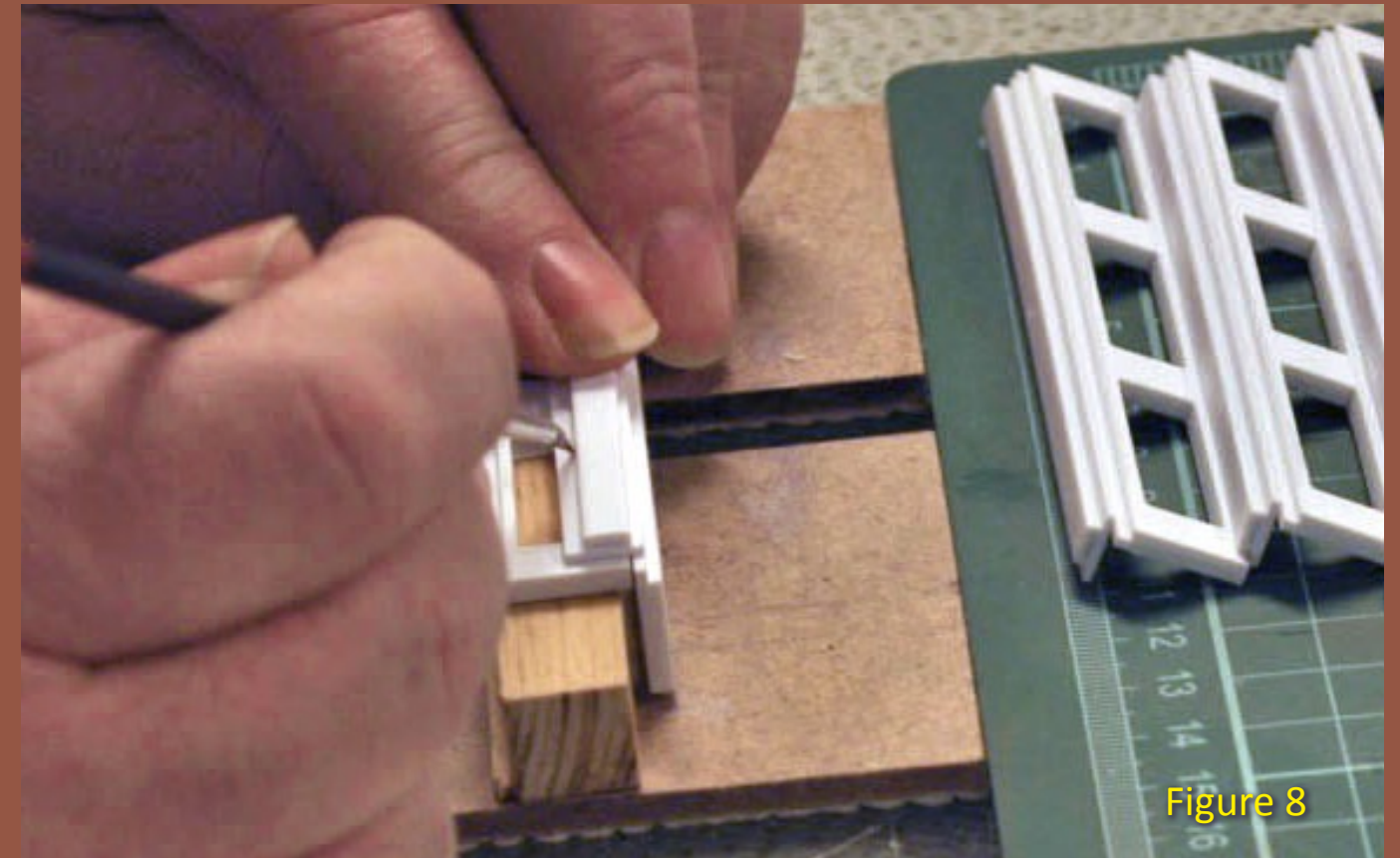


Figure 8

Figure 7: I drilled holes the size of the lamp shade's neck in the styrene channel.

Figure 8: Then I glued the channels to the bottom of the window framing.

Figure 9: The lamp shade looks great. I'll run the wires down the sides of the trusses and their support columns and through the floor so they'll disappear.

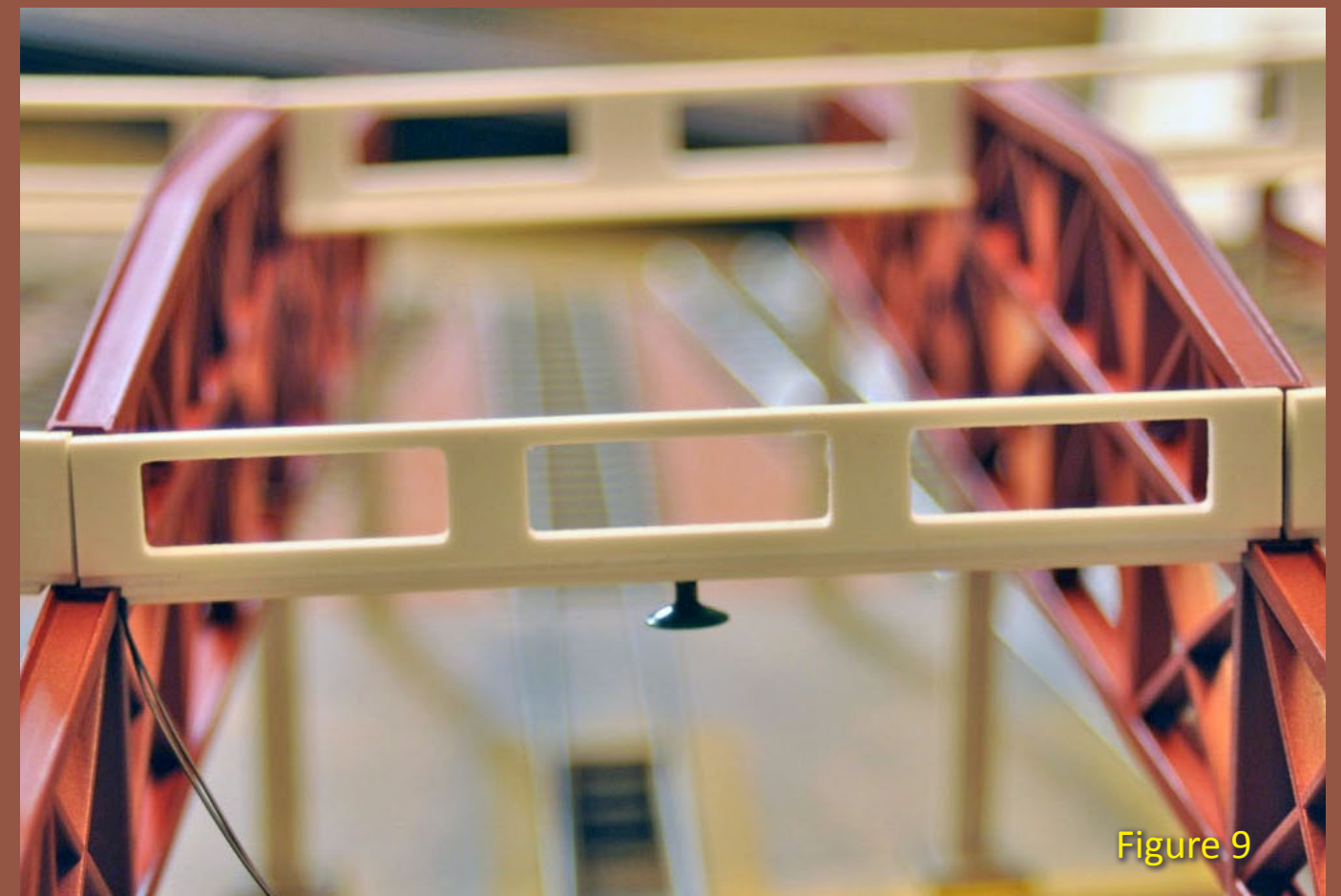


Figure 9

STEP 2: Modifying the trusses *Continued ...*

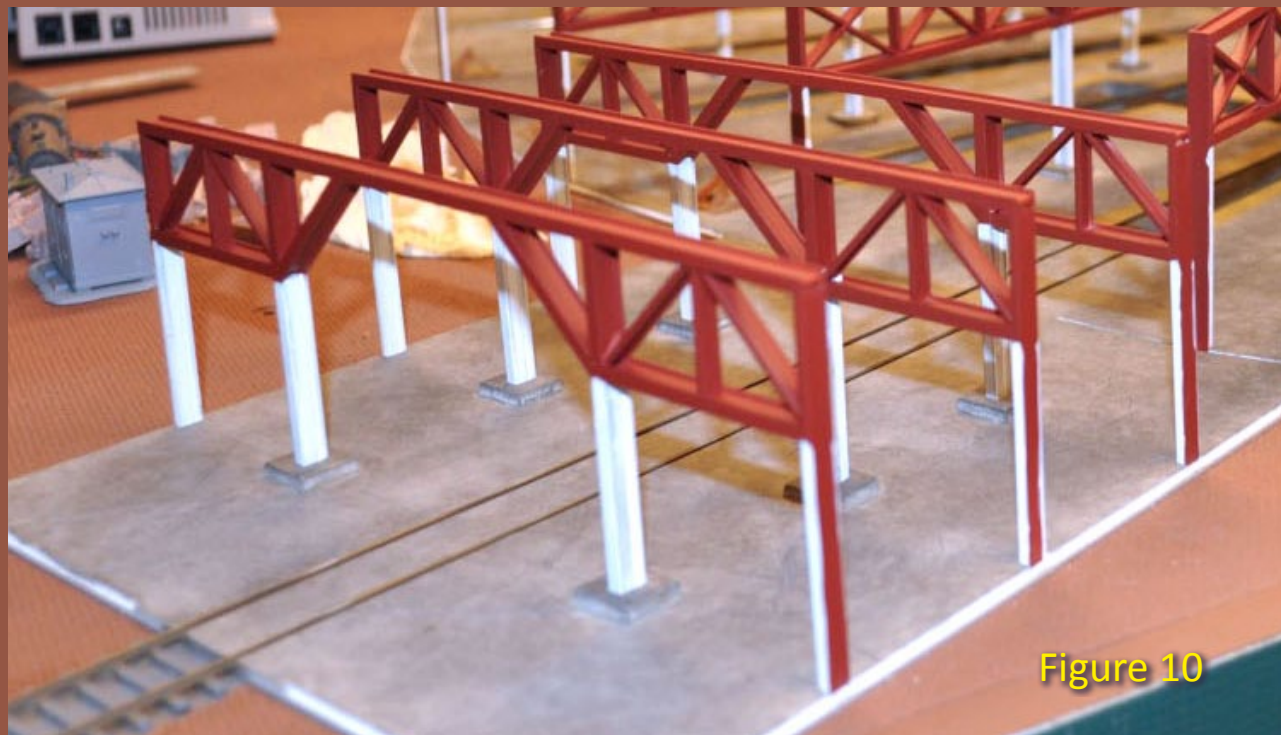
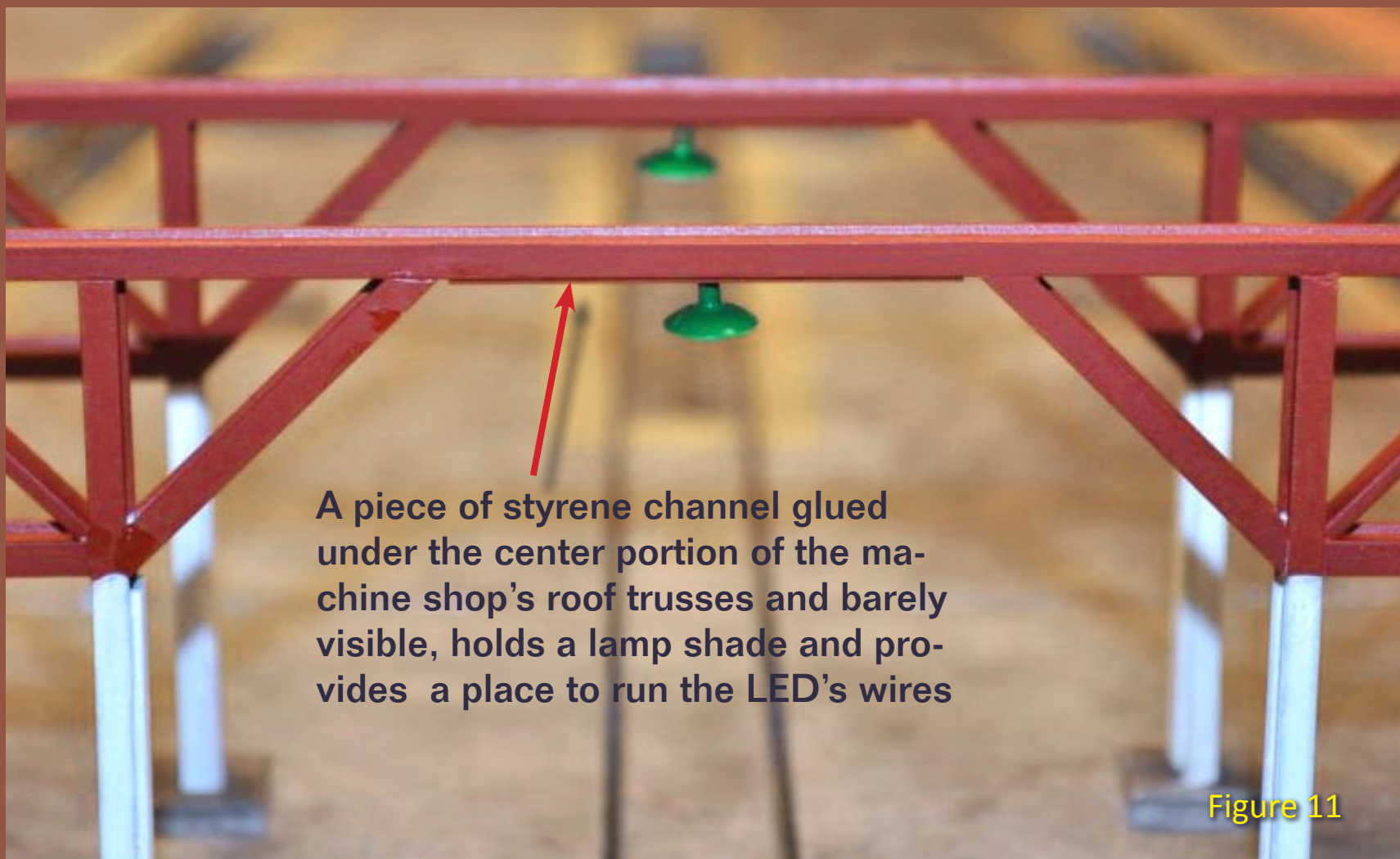


Figure 10: There are no clerestory windows in the machine shop's roof.

Figure 10



A piece of styrene channel glued under the center portion of the machine shop's roof trusses and barely visible, holds a lamp shade and provides a place to run the LED's wires

Figure 11

Figure 11: I solved this problem by gluing a piece of styrene channel under the center of the roof trusses. The wires run through the channel to one of the I-beams and from there down through the floor.

STEP 3: Adding wires to the LEDs

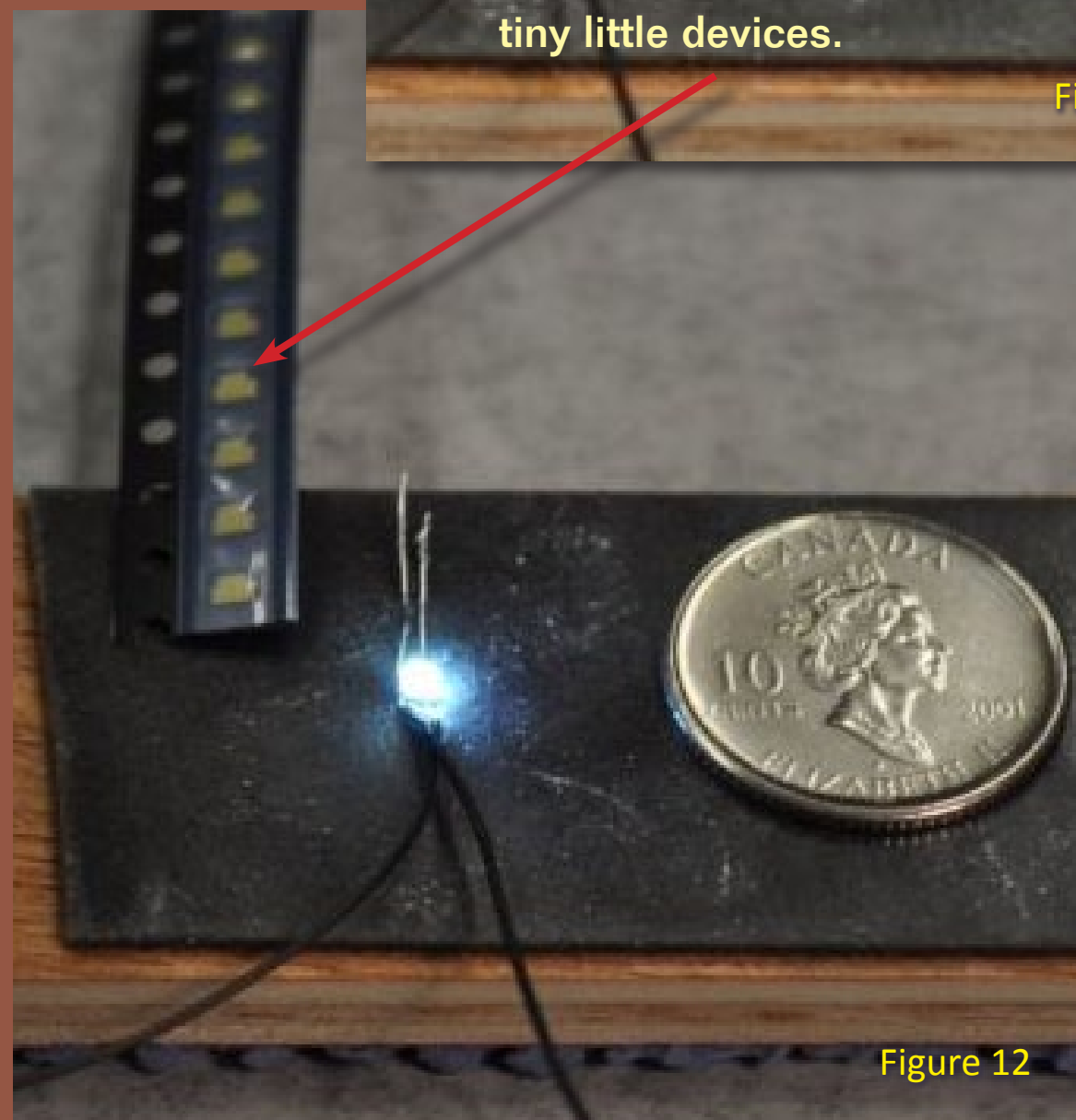
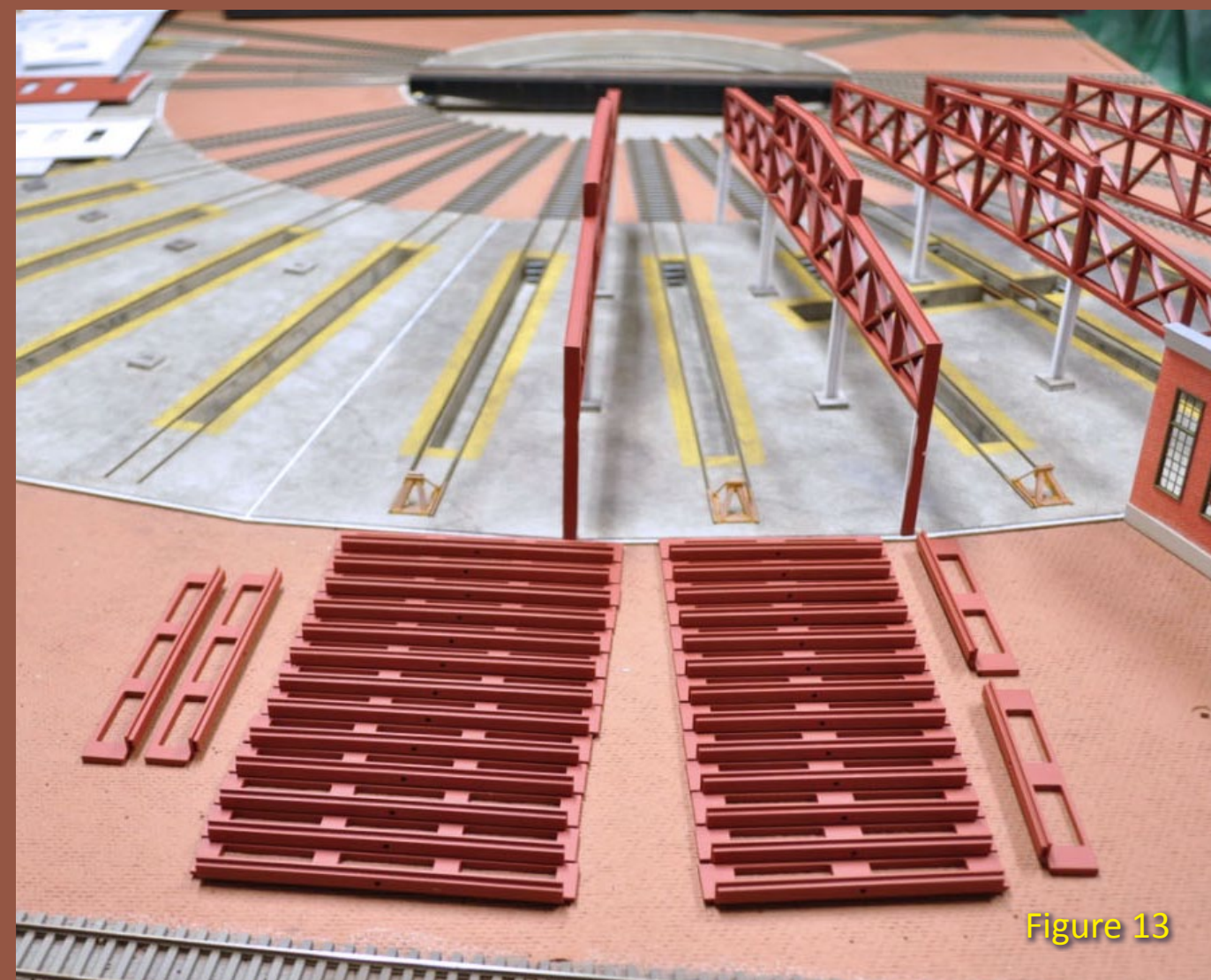
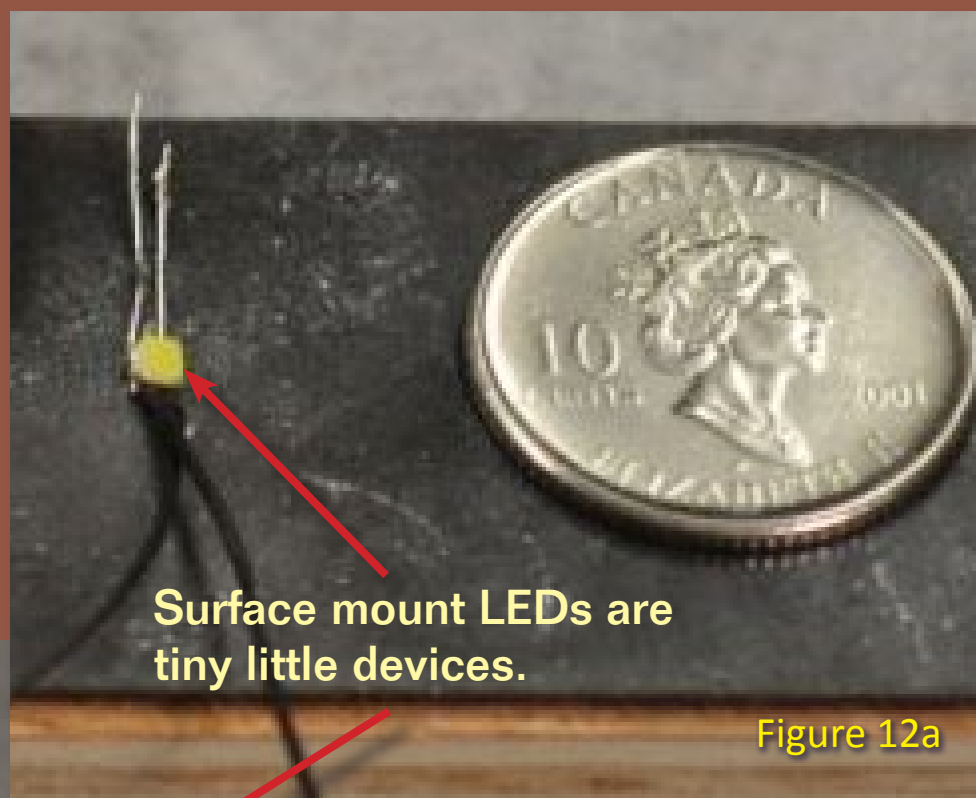


Figure 13: How many of these do I need? Yipes!

Figure 12: Surface mount devices (including LEDs) have no wire leads – they’re intended to be soldered directly to a PC board. I used this simple fixture to solder wires to those tiny LEDs. It’s just a piece of wood with some double sided foam tape. The tape holds the LED and the wires in position while soldering. I scrapped a few LEDs before I got the hang of it, but after that they went quickly. I applied liquid flux (rosin, NOT acid flux) to both the LED pads and the wires. Then I tinned both before positioning them on the foam tape. A quick zap with my soldering iron and the itsy-bitsy LED has leads soldered to it.

STEP 4: Painting and masking the walls outer surface



Figure 14: I used my usual latex concrete color for the foundation, applying it liberally because I knew I would need to mask them before applying other colors or the brick paper.



Figure 16: I carefully sprayed on Krylon Aluminum to paint the cornices on the outside of the walls.



Figure 15: I masked the machine shop walls so I could paint the cornice an aluminum color without getting it on the bricks and concrete.



Figure 17: I masked the walls for the next paint application, a red automotive primer. This will prevent any white showing through when I add the [MicroMark brick paper](#) to them.

STEP 4: Painting and masking the walls outer surface *Continued ...*

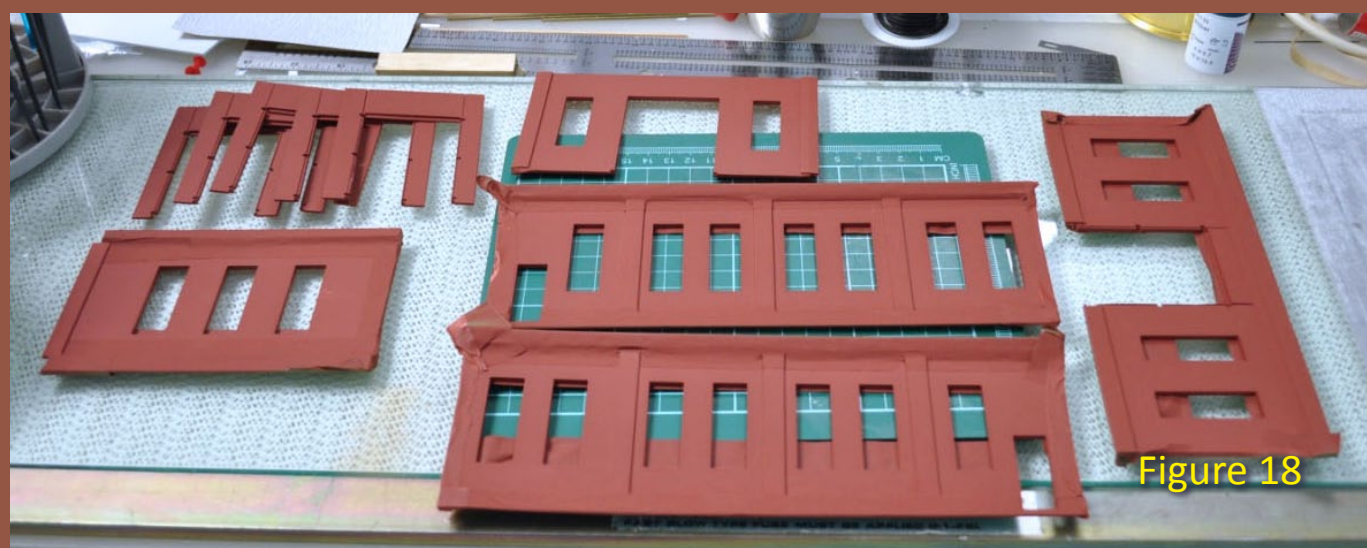


Figure 18



Figure 19

Figure 18: The primer is ideal for attaching the brick paper.

Figure 19: It's not a pretty sight after unmasking, but wait...



Figure 20

Figure 20: Tadaaaaaa! A finished machine shop wall with concrete footing, aluminum flashing and brick paper. Now it's off to finish all those other walls before some serious assembly.

Thank you for reading my column. Next time I'll show step-by-step how I solder those tiny LEDs, plus delve more deeply into self-stick brick paper installation and final assembly of the machine shop and the first five roundhouse stalls including the fire barrier wall.



COMME-N-TARY: N Scale Layout Ideas

RuNNing on Empty - ideas for detailing open cars ...

Modeling in the hobby's most eNgaging scale

About our
N-scale columnist



John Drye is our N scale editor and columnist.

[Click here](#) to learn more about John.



Modeling empty cars can be as much fun as creating cars with loads. Simple materials can represent what gets left behind in an empty car.

Open-top cars can be among the most interesting on the railroad. Flatcars and gondolas carry a variety of loads, from the mundane (steel plates and girders) to the unusual (farm implements and military equipment). Such loads are a topic to themselves. However, these cars spend much of their time without loads, and modeling their empty state can provide as many challenges and rewards as a loaded car. This column discusses ideas for modeling cars “running on empty”

The Prototype

First, let's take a look at some prototypes. These pictures are from the 21st Century, but much of this information is valid for times as far back as the late steam era.

FIGURE 1: This “empty” gondola is not empty at all. It contains the residue of previous loads.



FIGURE 2: This rotary dump hopper shows the remains of its previous load, in this case dirt and gravel.

Figure 1 (previous page) shows that an “empty” gondola is actually not completely empty at all. Remnants of previous loads (dirt, gravel) or relics of lading (wood blocks, steel bands, etc.) are usually left behind. Sometimes the dirt and gunk is left in the corners and especially in earlier eras, vertical wood blocking is left standing. The lack of a load also reveals the rust, scrapes and dents that gondolas suffer over their hard lives.

Even coal hoppers that are emptied by rotary dumpers or through hatches seldom discharge their entire load. Along with rust, a few stray lumps of coal usually decorate the interior.

Other loads also leave evidence of their travels. Items carried by standard wood-deck flatcars need to be firmly attached per FRA regulations.

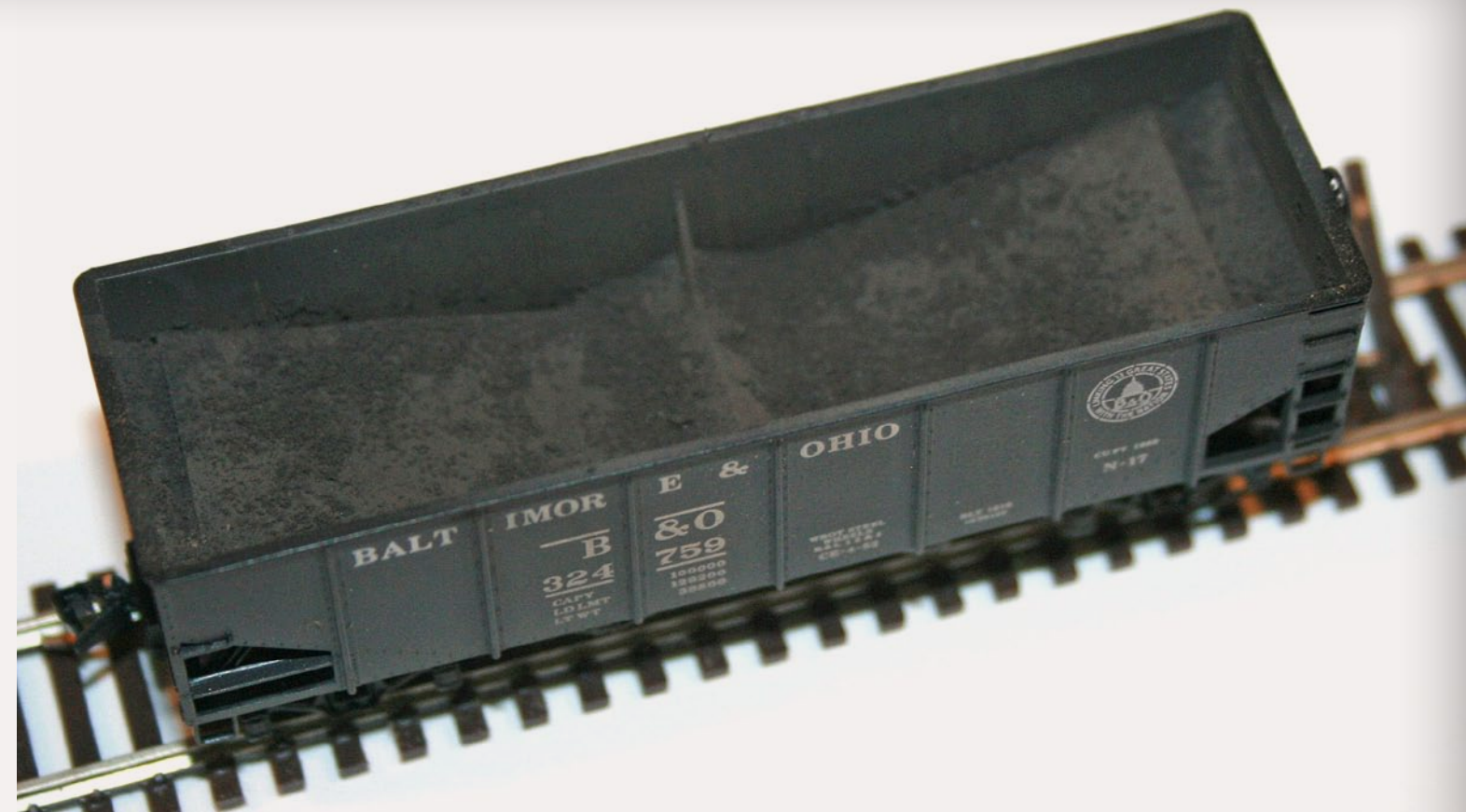


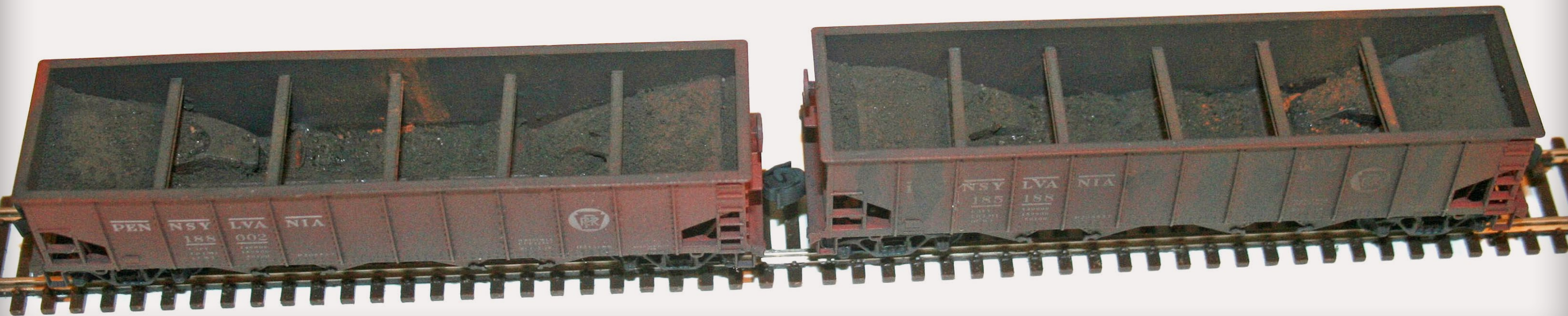
FIGURE 3: The remnants of a coal load in this B&O two-bay hopper help disguise the lead weight added on the slope sheets.

Such blocking and strapping often remains until removed in preparation for the next load.

Flatcars that carry pulpwood or steel coils also retain evidence of their usual loads. Pulpwood leaves a residue of bark and wood chips and steel coils often are loaded along with junk and flotsam from the mill.

There are lots of ways to turn that simple empty car into an

FIGURE 4: These PRR four-bay hoppers have added weight, detailing, weathering, and a little leftover coal.



interesting part of a model consist. Let's look at some examples.

B&O Coal Hopper

Hoppers without internal bracing can benefit from a little detailing of the insides. This B&O two-bay hopper (figure 3) has lead weight cut to the shape of the slope sheets followed by weathering. As with the PRR hoppers, coal was sprinkled inside. Black weathering chalk was applied after other work was complete. The chalk does a good job of representing coal dust and ties the weathering and coal load together.

PRR Four-bay Hoppers

As we have seen, coal hoppers don't actually travel "empty". These PRR four-bay hoppers (figure 4) have been detailed with internal cross-braces and weathered with paint and chalk. Some additional weight was added to these cars using slope-sheet weights from Bowser two-bay hoppers. Since half of the two-bays travel loaded, these nice weights were borrowed from the cars where weight is covered by a load. After their weathering was completed, a little scale coal was sprinkled in the bottom of the bays and along the slope sheets, secured with diluted white glue. The empty-car detailing has the advantage of making the weights

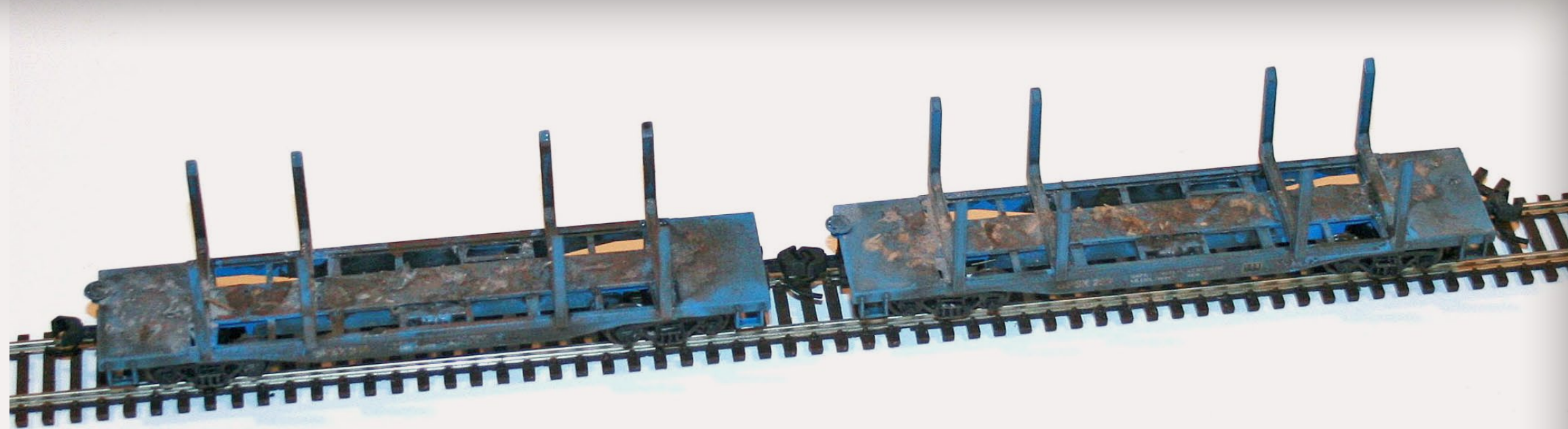


FIGURE 5: These log flats are returning to the lumberyard with the remnants of a pulpwood load, represented by sawdust.

FIGURE 6: This TTX flatcar shows the remnants of a prior load using stripwood for blocking and chart tape to represent steel banding.



barely noticeable from normal viewing angles.

Log Flats

The remnants of loads are probably most apparent on flatcars. These two log flats (figure 5) usually carry pulpwood in our model world. The empties were weathered with a brown wash and the

decks were "rusted" by stippling with red, brown and silver paint. The scraps of wood and bark left behind were represented with sawdust. Sawdust used to be a scenery standard, but it just looked like, well, painted sawdust. But in N scale, sawdust has just the right texture to represent the remains of a pulpwood load. The sawdust is applied with a little

diluted white glue. More of the brown wash is applied after the glue has dried.

TTX Flat

Flatcar loads are secured with lumber blocking, chains and steel banding. Chains are valuable and are usually, but not always, removed when the cargo is

unloaded. The rest of the tie-down materials are often left on the car until the next cargo is loaded. These are represented on this TTX flat (figure 6) by stripwood and chart tape. I weathered six 8"x 8" scale wood blocks with an alcohol wash. Next, a dozen short strips were cut from a roll of chart tape I found at an arts and craft stores. Chart tape is also useful for modeling tie-downs when loads are present. I attached the stripwood blocks in pairs using thin white glue. I also scattered the tape tie-downs randomly across the deck. The tape has a sticky side which holds the material in place nicely.

Conrail Gondola

Gondolas provide a great canvas for the freight car modeler. They see hard service and are almost always well-rusted and battered. It is hard to over-weather these cars, and the almost-empty interiors of the empties are usually a mess. This CR gondola (figure 7) has been weathered and rusted with washes and chinks. Weathering chalk is a great material for representing the dried, rusty interior of gondolas and other open-top cars. I applied several red and brown chalk colors to this car with a little bit of scale "dirt" sprinkled in the interior. The car also has a pair of vertical braces (at the right side of the photo) I made from stripwood, painted, and glued vertically on the end of the car.

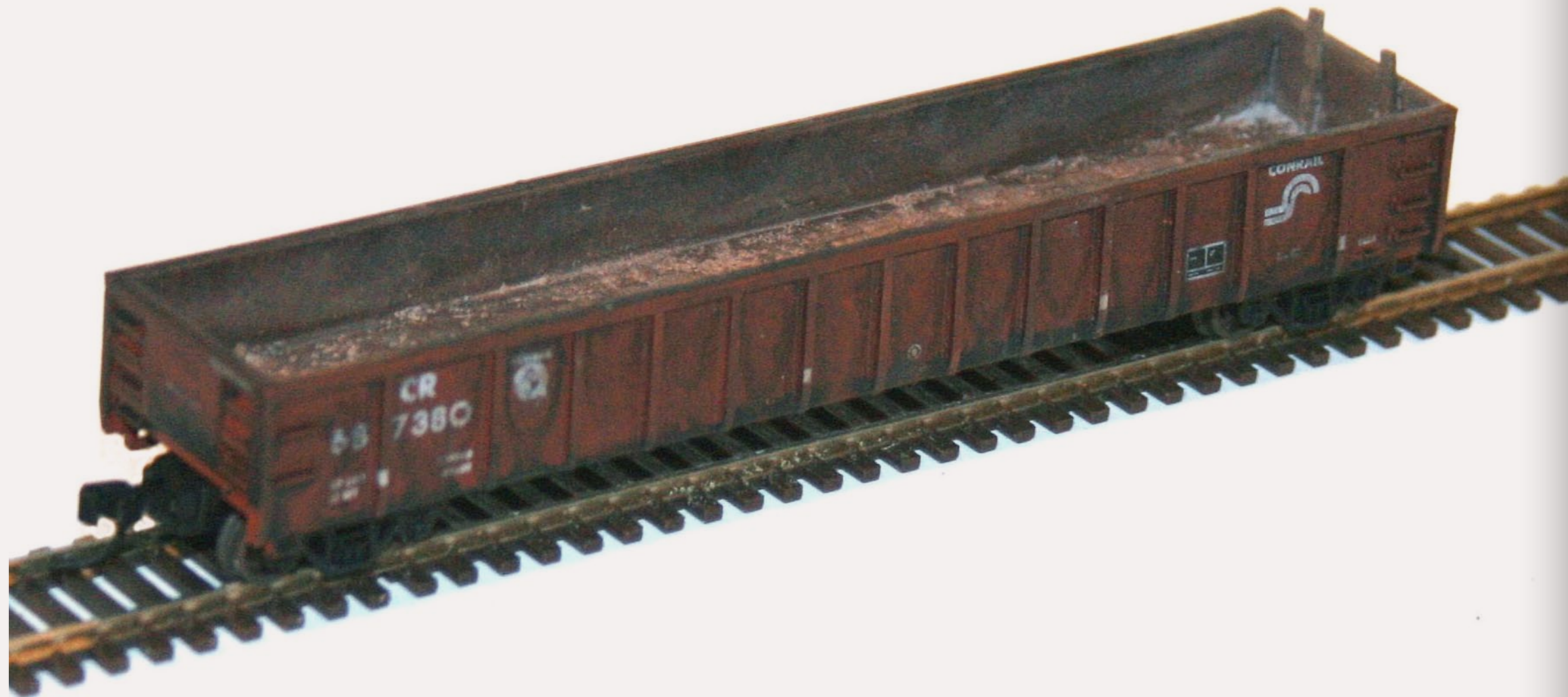


FIGURE 7: CR Gondola—Hard service has taken its toll on this CR gon. A pair of vertical braces at the far end suggests the attachment of a previous tall load.

FIGURE 8: NS Gondola—This gon still carries the remains of the lading for a heavy (probably steel) load. The load surely contributed to the rusted and worn condition of the car.

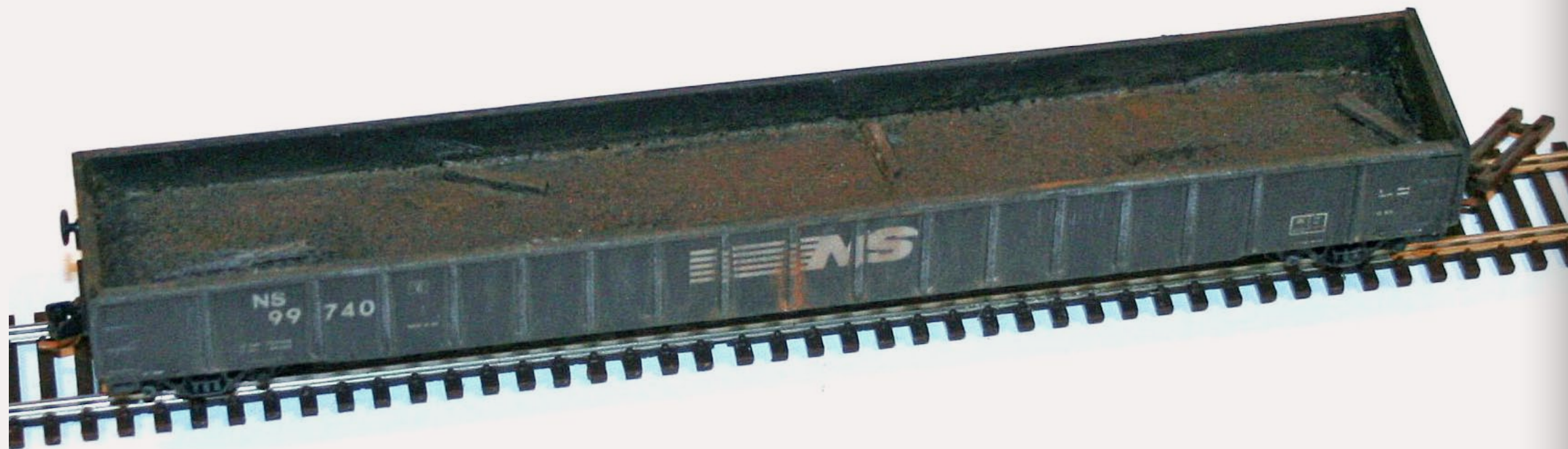




FIGURE 9: This CSX gondola carries the remnants of a series of toxic loads, represent by a variety of scenic materials.

NS Gondola

I gave the NS gondola (figure 8) the standard wash and chalk treatment plus a little dry-brushing on the side ribs. In addition to the dirt left in the car, several lengths of stripwood were broken into short segments, glued in the car and weathered along with the rest of the interior. Breaking, rather than cutting the stripwood, provides a varied and interesting texture suggesting that something heavy was

dropped into the car (exactly what gondolas are for!).

CSX Gondola

In the 21st Century, gondolas carry some truly foul loads; trash, old fill dirt, scrap metal and worse. Not surprisingly, these cars are often not completely emptied. I weathered, “tagged”, and rusted this CSX gondola (figure 9). I represented the remnants of a series of these loads by sprinkling a liberal amount of

“scenery leftovers” in the gondola. This material is found at the bottom of my scenery storage box – it consists of a variety of spilled scenic dirt, foam, twigs, ballast and gravel. This “toxic” mixture does a pretty good job of representing the remnants of nasty prototype loads. Other stuff could be added: old tires, junk brick and block, or scrap wire and wood.

Empty Headed Thinking

On most railroads, hoppers travel empty half the time, providing plenty of opportunities to detail the visible interiors. Gondolas and flats

also spend a considerable amount of the time without loads.

These cars provide a plethora of opportunities to create interesting cars that are RuNNing on empty.





About our narrow gauge and branchline columnist



Lew Matt is a published writer, photographer, and illustrator whose work has appeared in many model railroad hobby magazines.

[Click here](#) to learn more about Lew.

THE LITE AND NARROW: The Weathered Wood Fence

Ramblings on Narrow Gauge and Branchline Modeling



Custom-building fences is easy and inexpensive ...

A few issues ago, *The Lite and Narrow* took you through the construction steps necessary to scratchbuild a split-timber fence using inexpensive, found material. Other fences are considerably easier to build, and you can produce yards of fence cheaply and inexpensively.

Off-the-shelf kits and pre-builts are also available for those who prefer them; however, the time it takes to adapt a prebuilt to your terrain could be used to scratchbuild that same fence in place for pennies.

Wooden fences are a great visual tool for model railroaders. They have a multitude of textures and color and can delineate space, emphasize the background or the foreground.

Building a fence at an angle to the view can lead the eye to another bit of eye candy just off the main scene. Building a trapezoidal shape fence that grows shorter as it enters the depth of the scene can create a false sense of distance and contribute to forced perspective. Fences are a

way to disguise the joined edges of modules or a diorama inserted into a module or layout.

“Wooden fences are a great visual tool for model railroaders.”

A tall board fence makes an excellent background for photographing a car or engine, or for covering with posters to make an eye-catcher for that

empty space between building flats. Board fences just in front of background flats can add depth and forced perspective to a very shallow scene.

The fence construction materials I prefer are either cheap or free. For the board fence, I am also using Clever Models barn boards available as a download for \$1.25, Multi-scale

Continued on Page 102 ...



FIGURE 1: A railroad employee is fixing a loose board to keep the kids off the railroad property while a young adventurer (culprit?), his dog, and his parent look on. This simple diorama makes an interesting mini-scene when placed in between two buildings or near the tracks.



FIGURE 2: These posts were cut from 1/16" birch and bamboo skewers. I like the bamboo as they are stronger and easier to shape. They are a little bigger than the birch and need to be shaved down. The (red) notches are cut the width of the coffee stirrers used as the stringers, and the depth of the cut is deep enough that the 2" X 6" stringers are flush with the post. Stain all the boards at this step.



FIGURE 4: The tops of the fence boards are trimmed so that some of the boards are longer than others. Don't overdo this feature, less is more.



FIGURE 3: The Clever Models weathered boards are color printed on heavy card stock and two sheets are glued back-to-back so both sides of the fence will have detail. After cutting the fence strip from the master sheet, a dull blade is used to indent the lines representing the individual boards, and a darning needle indented the nail holes.

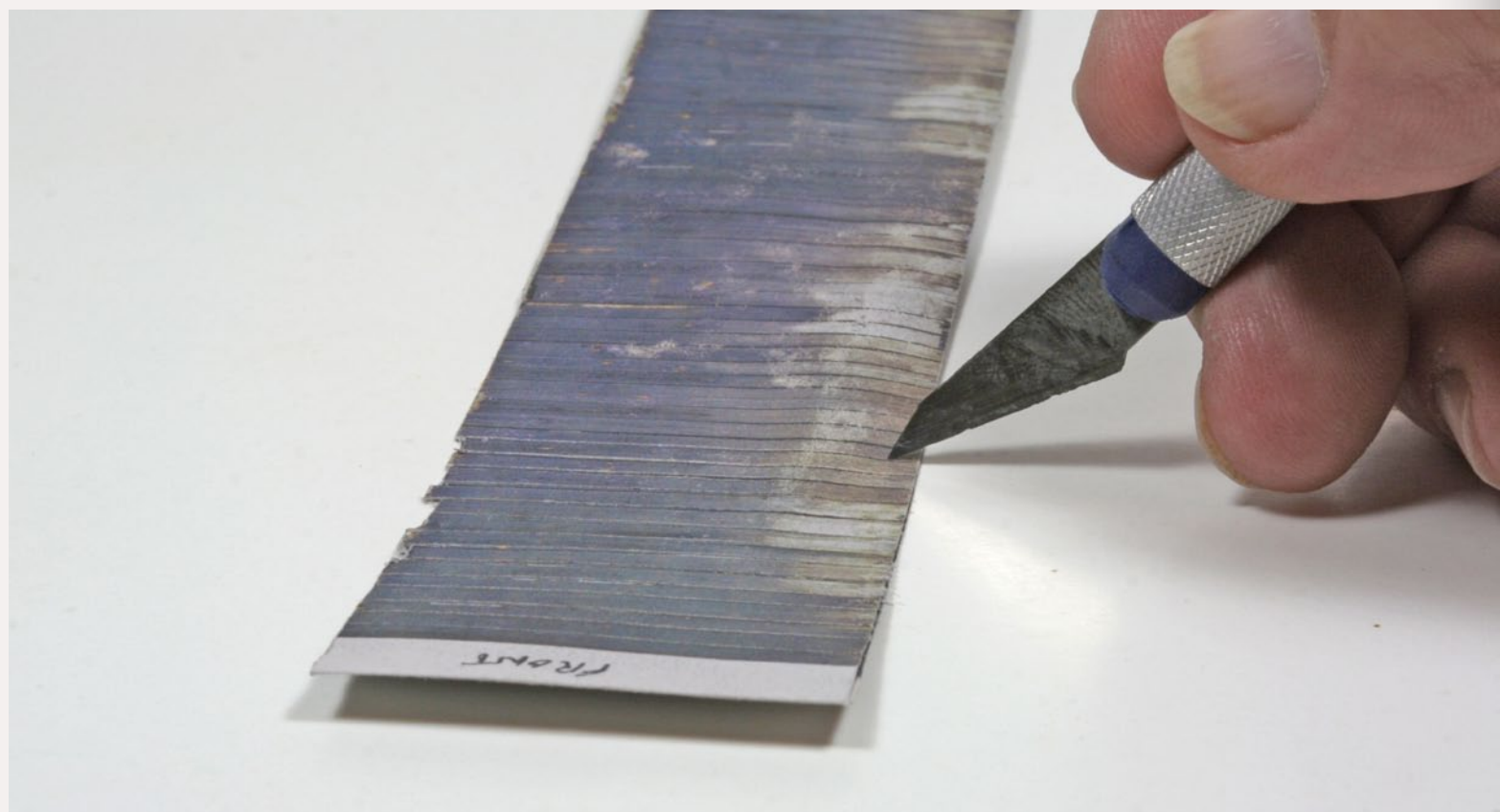


FIGURE 5: The bottoms of some of the boards are scraped with a sharp blade so that the bottom will absorb extra stain. A few of the boards are cut apart slightly at the bottom for more texture.

... Continued from Page 100

Weathered Wood #TO-wdp-05e. After you download, you can print out as many sheets as you need for yards and yards of fence and all of your

other wood projects. Check the detail sheets at www.clevermodels.net/ – they have some neat free stuff on their web page, too. Other materials are toothpicks, coffee stirring sticks, popsicle sticks, shish-ke-bob skewers,

“My preference for gluing wood or paper is white glue. It dries clear, holds very well, and is difficult to see when dry.”

chopsticks and others. Use your imagination or purchase balsa, bass or other stripwood from your local hobby dealer.

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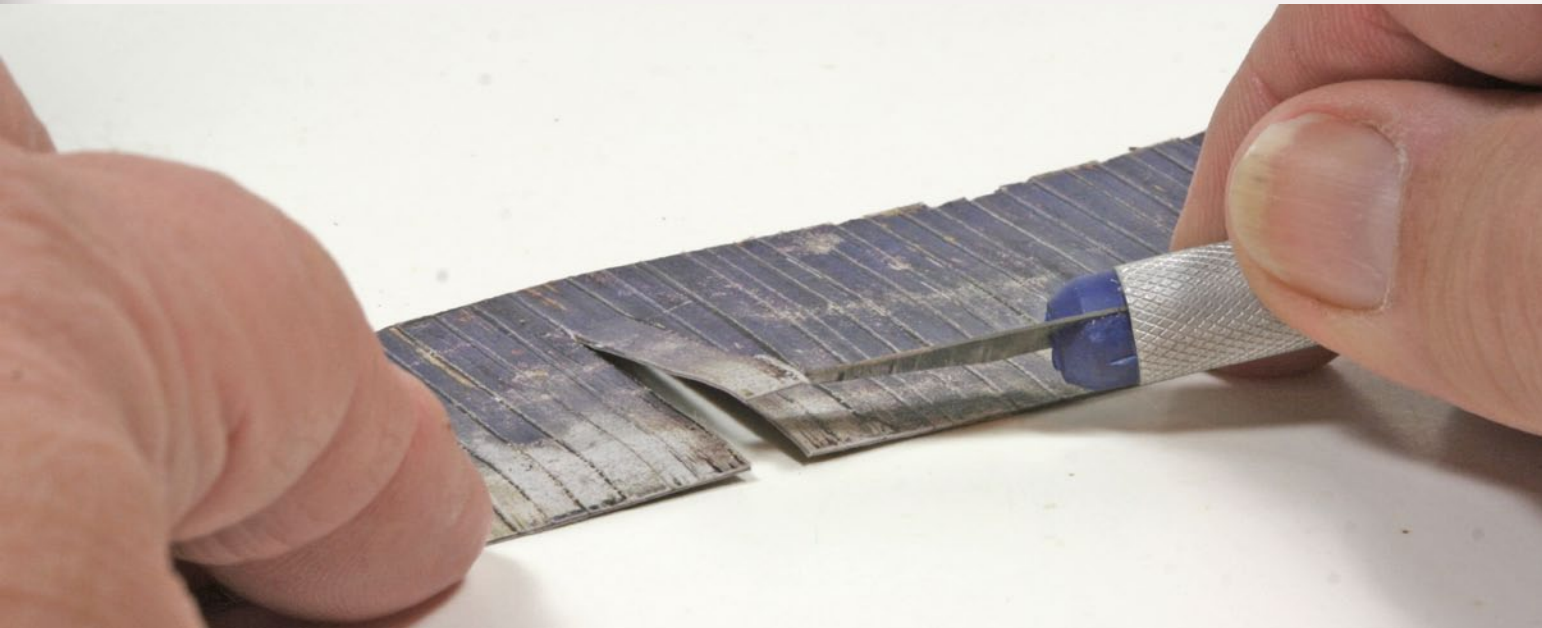


FIGURE 6: A single, large board is sliced from the fence, but not completely. The top is still fastened at the level of the top stringer.



FIGURE 8: Work stain along the cut edges of the loose board so the white paper doesn't show.



FIGURE 7: Stain is brushed on the edges of the wood fence, top and bottom to hide the color of the paper. A medium gray marker can be used, also.



FIGURE 9: The post and stringers are shown stained and assembled. Joints in the stringer are located over a post but always splice the upper and lower stringers on different posts.

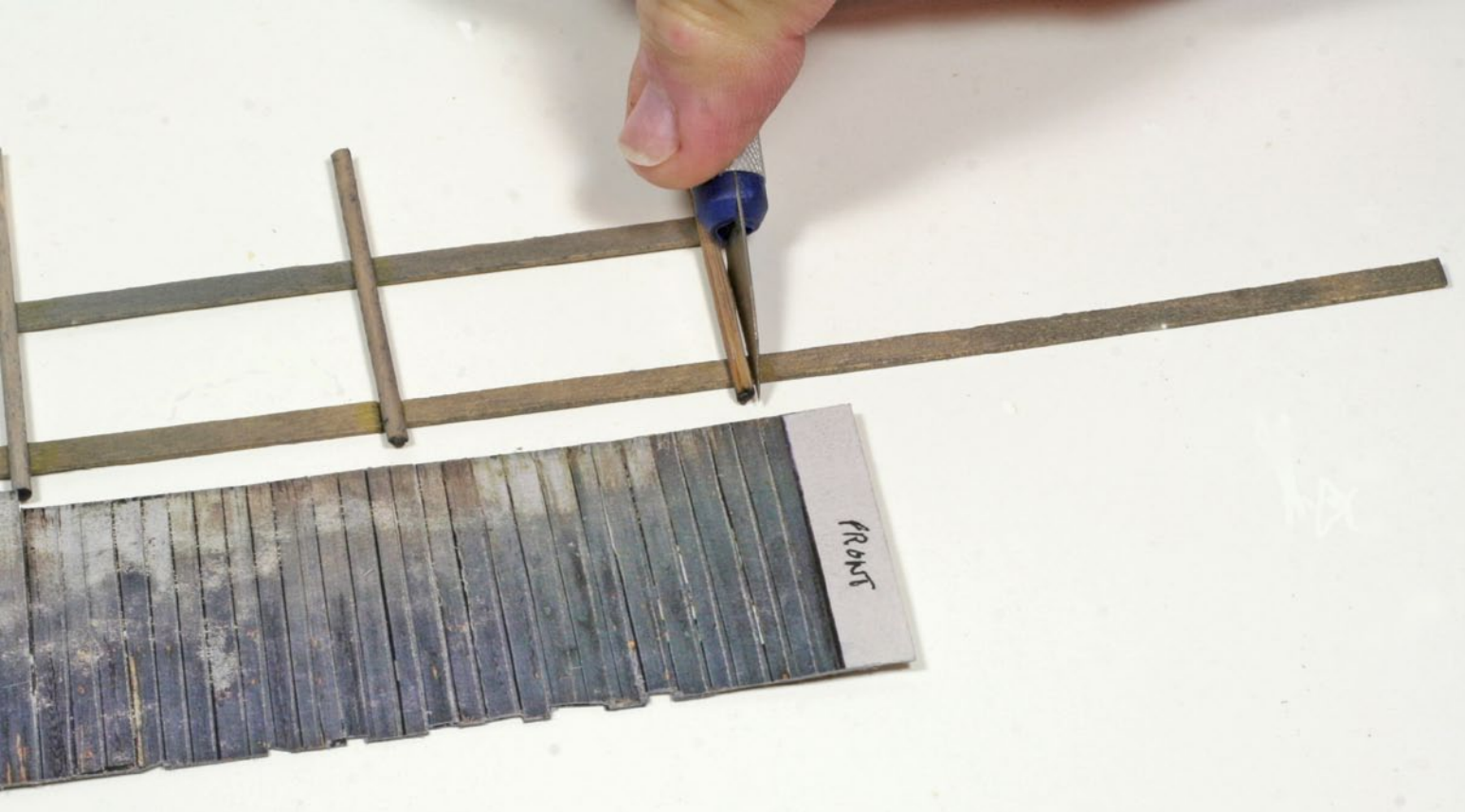


FIGURE 10: Trim the stringers flush with the last post in the fence. Use a very sharp knife and expect that a stringer may break loose from the post. Glue it back and hold it together with a small alligator clip or sprung clothes pin.



FIGURE 12: This is how the back of the fence looks. The gray-dyed posts and stringers weren't the same color as the Clever Models fence, so I used some opaque water color, Payne's gray, and did a light wash on the wood. That evened out the colors of the wood to match the paper print.



FIGURE 11: This is how the front of the fence will look after gluing the posts and stringers on the back. The fence is usable at this stage or can be further detailed.

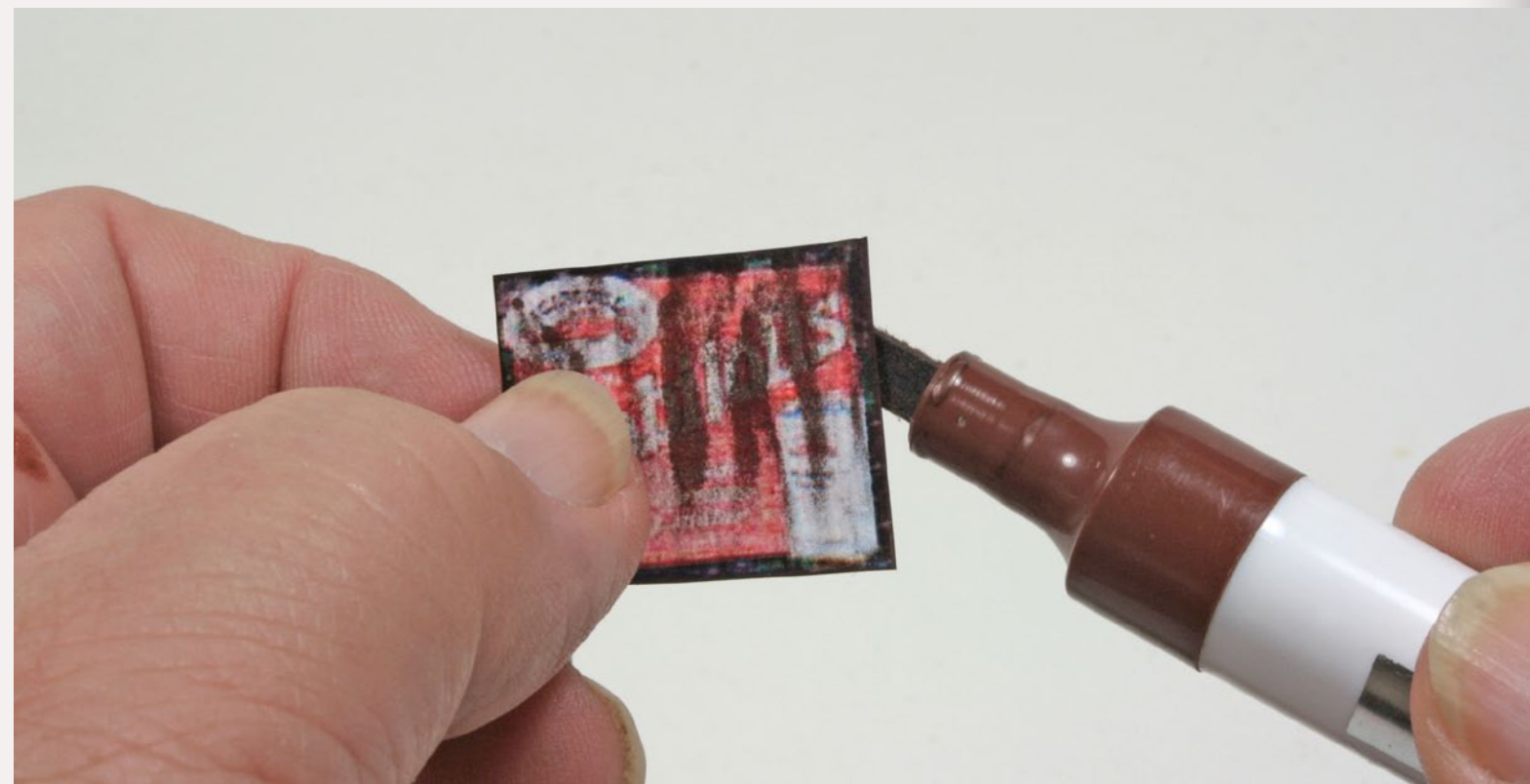


FIGURE 13: I used a brown permanent marker to color the edges of the bills posted on the fence. The rust streaks are made by lightly wiping the felt tip across the back of the poster until the color bleeds through.

... Continued from Page 102

Prestain or color all your fence materials before building so you don't have to worry about glue spots interfering with staining or painting. Use light, neutral gray markers to darken the white edges of paper or cardstock printed boards.

My preference for gluing wood or paper is white glue. It dries clear, holds very well, and is difficult to see when dry. Freshly-glued fences should be weighted overnight so they can dry flat and sturdy.

Keep lots of sharp Exacto blades on hand and change them frequently. Use a self healing cutting surface and cut lightly to avoid snags. Paper can be cut with razor blades or scissors. NWSL Choppers are good for making many same size boards and posts from wood. Watch the thickness of your boards and posts in the scale you work in. In HO, a coffee stirrer is a timber, not a board. Diagonal cutters make nice cut ends for posts in the smaller scales.

 **Reader Feedback**
(click here) 



FIGURE 14: The finished fence segment. The boards are from the Clever Models weathered wood sheet; figures are assorted metal, plastic and resin castings from various manufacturers, and the signs are from Ghost Signs and Clever Models. The bits of vegetation along the bottom of the fence help anchor it to the scene.

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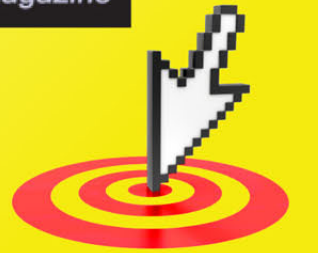
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Model Railroad Hobbyist newsletter™

March 2011



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The Old Yardmaster



The latest model railroad products news and events

Lee English, the boss man at Bowser, is currently working on mold drawings for a new HO scale C-636 road switcher. No estimate yet on an intro date, but when it's ready, Bowser's Alco diesel lineup will include a C-628, C-630, and C-636. What an abundance of goodies we modelers enjoy ...

The team that directs the San Diego Railroad Museum in the city's famed Balboa Park believes in attracting model railroaders while they're young. The museum is offering a Summer Railroad Camp for kids that includes railroad safety education, hands-on guidance in building model kits and learning how real locomotives work. The series of five-day sessions run through June and July. For more details visit our Selected Events page ...

Keith Wilite of North Kansas City, is a man who knows his priorities. Keith, who owns Scale Segmental Bridge Company, has suspended manufacturing operations in order to have time to build a layout with his son. If all goes according to plan, Keith will be back in the bridge business in a year or two. Can anyone think of a better reason to close up shop for awhile ...

Best wishes to Irv Holloway who retired in February after 39 years with Bachmann's service department. Irv's special area of expertise has been Bachman's large scale products ...

Speaking of retirement, Al Westerfield will stop accepting new orders after March 31, 2011. While it is sad to see the end of some of the finest prototypically accurate freight car models ever produced, no one is more deserving of relaxing and having some fun working on his own models and layout than Al. Visit www.westerfieldmodels.com for information on kits still available ...

Thanks to Steve Vallee for alerting us to an informative web site that takes the mystery out of chalk marks on freight cars in various Canadian Pacific yards. Check it out at www.trainweb.org/oldtimetrains/CPR/general/chalk_it_up.htm ...

Narrow gauge fan Ron Hildebrand says the 1895 Silverton, Colorado, home of famed rail empire-builder Otto Mears, is for sale. The asking price for the historic house has recently been marked down from \$546,000 to a more modest \$439,000. Several pictures of the property are available at www.trulia.com/property/3017025666-Silverton-CO-81433 ...

Athearn will build it, Walthers will sell it! The two giant firms are getting together to deliver an Amtrak P42 locomotive decorated in the Phase V scheme. Reservations are suggested for the limited-run HO scale model which is scheduled to arrive this fall ...

Brian Bussey of Eastern Seaboard Models is hard at work on developing an N scale X58 boxcar for release late this year ...

Walthers says it will use Soundtraxx Tsunami sound systems on its Proto2000 locomotives beginning with the HO scale PRR Broadway Limited E8A and E7B units ...

In other good news from Walthers, the MSRP on the next round of its HO scale Trinity 30,145 gallon ethanol tank cars will be reduced from \$39.98 to \$34.98. We're not sure if the price reduction is driven by competition or a stabilizing of manufacturing costs overseas, but either way, we're happy about it ...

In order to keep MRH readers up to date on the newest model railroad products, we are making a change in how we deliver the news. While the Old Yardmaster will continue to keep readers informed about industry happenings, trends in the hobby, and future product development, more immediate news about brand new items will shift to our web MRH Newsfeed ([click here](#)) which will be updated on a continuing basis. Reader comments are always welcome at MRH and we look forward to hearing your views on the change. Now let's get on with the news about new products ...

PRODUCTS FOR ALL SCALES

Autographed copies of *"The Model Railroader's Guide to Steel Mills"* are available from **Alkem Scale Models** (www.alkemscalemodels.net). As a model builder himself, author Bernard Kempinski wrote the book to help his fellow modelers understand the workings of steel mills and the railroads that serve them. The book also stands as a valuable reference for railroad and industrial historians. Chapters include the steelmaking process, steel mill railroads, steel mill track planning, and modeling tips. Autographed copies are available at \$21.95.

NJ International (www.njinternational.com) has introduced FlashMaster, a system that provides bi-directional grade crossing control of flashing lights (LEDs) for a single track. The system operates on 7-18 volts AC or DC at 300ma and can drive up to eight pairs of LEDs. The FlashMaster sells for \$59.99 and can be expanded to two-track operation with the addition of an Optical Sensor Cable, which is priced at 24.99.

The Underground Railway Press (www.greatdecals.com/URP.html) has released the 2011 edition of its annual *"One-Source Scale Model Railroad Industry Directory"*. The directory lists over 900 active North American manufacturers and publishers. Note that this is an address and product directory, not a buyer's guide. The industry directory is available at \$10 plus \$2.50 postage from Underground Railway Press, PO Box 814, Brevard, NC 28712-0814.

"Masonry Wall Techniques for Structures & Dioramas" is the latest DVD title from **FosScale Limited**. In the how-to DVD, Doug Foscale demonstrates simple methods to create realistic brick, concrete, and stone walls. The techniques are suitable for building structure walls, foundation walls, or retaining walls in any scale. Subjects covered include coloring and weathering brick walls, adding signage, making quick-molds for rough-cut stone walls, making a mold and casting concrete walls with board imprints, and making molds to create a stucco wall with brick patches. The DVD is available now from www.foslimited.com for \$29.95.

Mudhen Models (www.mudhenmodels.com) is selling small gearhead motors suitable for powering animated projects and accessories. The motors are rated at 5VDC and measure 1"x 3/8"x1/2". They are priced at \$15 with free shipping to addresses in continental US. Suitable power packs are also available.

O SCALE PRODUCT NEWS

This nifty little industrial-strength table saw is available in O scale from **Banta Modelworks** (www.bantamodelworks.com). Adaptable to virtually any rural or light industrial scene, the kit consists of laser-cut plywood and basswood table and base, four laser-cut saw blades, and a Fairmont gasoline engine. The figure and gas can are not included. Banta's SawMill/Table Saw sells for \$24.



The hand-crafted pilot model above provides an advance look at an O scale Southern Pacific 2-8-2 class MK-4 Mikado being imported by **Glacier Park Models** of Ukiah, California. Road number 3227, shown above, is equipped with a class 120 C-6 Vanderbilt-style tender. Number 3218, below, has an SP whaleback aka haystack-style tender.



The models are being produced in Korea by Boo-Rim Precision and are expected to arrive sometime this spring. A Proto 48 conversion kit will also be available. Visit www.glacierparkmodels.com for reservation details.

Rusty Stumps (www.rustystumps.com) has laser-cut thin-frame factory windows available in O scale at \$10.35 and in HO scale at \$8.15. S scale versions are under development. The windows replicate the slender metal framed fenestration found on many industrial structures. The tilt-out vents can be set in various positions. Opening dimensions are critical in using these windows since here is no excess trim on the sides. A how-to article is available on the above web site.



Weaver Models, division of Quality Craft Models (www.weavermodels.com) is importing an O scale model of a Lackawanna caboose that will be available in four different paint schemes. In addition to the diesel-era DL&W scheme shown above, the brass model will be available decorated for Lackawanna (steam era), Erie Lackawanna early red, and Erie Lackawanna Spartan red. The ready-to-run model is priced at \$269 and is available for either 2-rail or 3-rail operation.

S SCALE PRODUCT NEWS

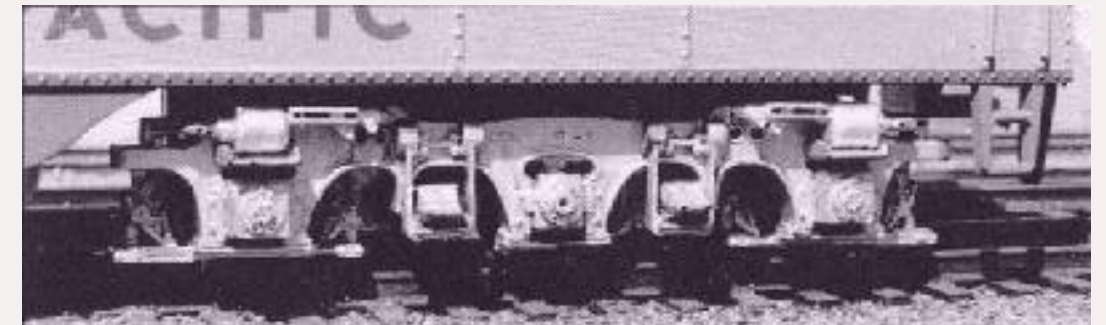
Motrak Models (www.motrak-models.net) has released The Supply Shed, a new S scale laser-cut structure kit pictured here. The kit includes laser-cut wood walls, roofing material, Grandt



Line windows and door, Tichy detail parts, pallet templates, and instructions. The craftsman style kit is priced at \$35 including shipping to US or Canadian addresses.

HO SCALE PRODUCT NEWS

A-Line Division of ProtoPower West (www.ppw-aline.com) sells a set of injection-molded styrene truck side frames to convert



Athearn SD45/F45 or GE C-Boat trucks into prototypically-accurate E-unit truck. Kit #29300 includes four sideframes, brake cylinders, leaf-spring hangers, and three different styles of journal covers. The kit sells for \$24.95.

Athearn (www.athearn.com) is taking dealer reservations for September delivery of DCC-ready C44-9W locomotives decorated for BNSF (heritage scheme) above, CSX YN2, Norfolk Southern, and Southern Pacific. The ready-to-run DCC-ready models will be available in three different road numbers at \$119.98 each.



Athearn has also set a September delivery date for SW1000/SW1500 locomotives that will be produced from upgraded tooling. SW1000 models include Via Rail (two schemes), and LTEX (three schemes) as shown here in preliminary renderings. SW1500 versions of the model locomotive will be released for Louisville & Nashville and Southern Pacific (three painting variations).

On the heels of the second run of Genesis F89F flat cars that arrived late last month, Athearn announced another run for delivery in September. The fall release of Triple 28/Twin 45 trailers will have a factory-installed center raised

hitch that modelers can easily replace with an optional collapsed-hitch included with the model. The cars have an MSRP of \$39.98, and require a 22" minimum radius for successful operation.

Also due in September are Canadian Census, BN, Glass Mountain Pumice, and Golden West Service schemes on an ACF Centerflow hopper car; a 50' plug-door boxcar decorated for CN (bilingual sides), CP Rail, Santa Fe (DF insulated and Super Chief slogans), and Soo Line (white body with red door); and a 50' flat car with two 25' trailers decorated for CB&Q (oxide red car, orange Burlington trailers), Canadian Pacific (black car, green trailers), Northern Pacific (black cars, green over gold trailers), and Southern Pacific (oxide red car, Daylight trailers). All cars are priced at \$25.98 each.

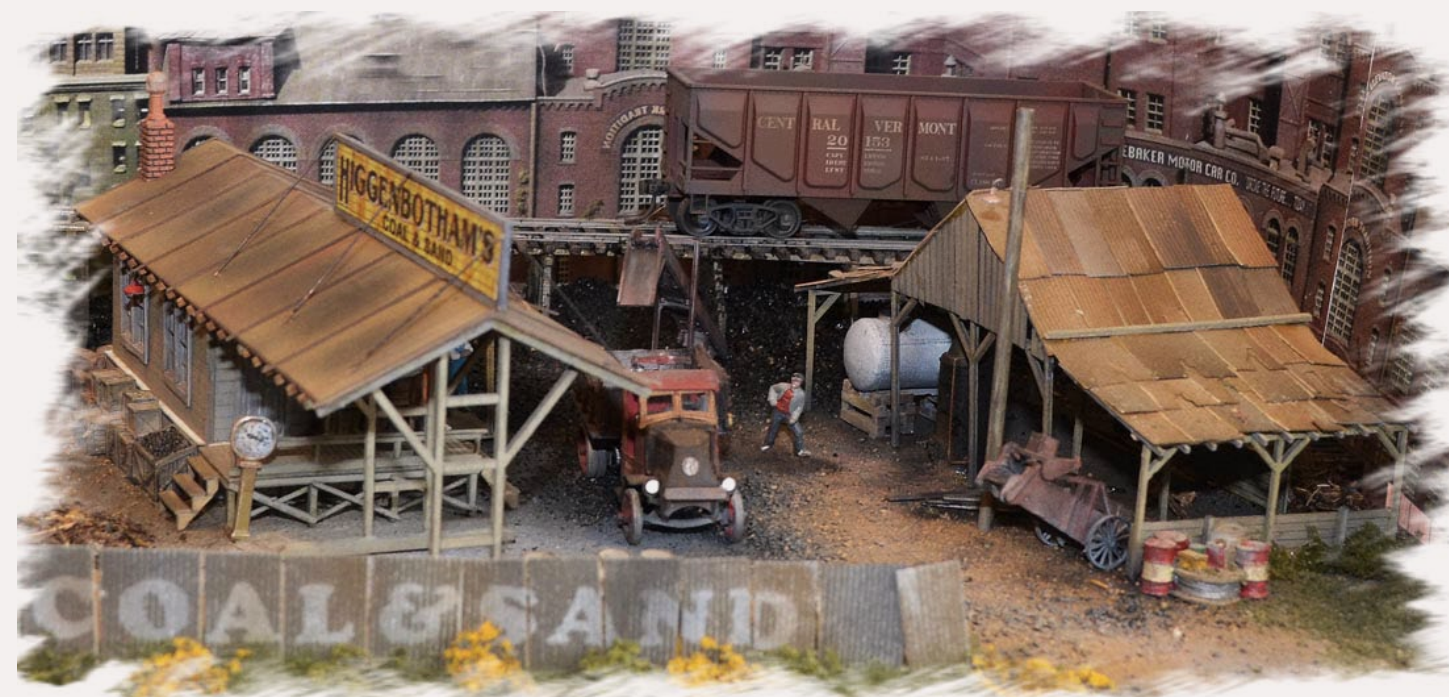
Bachmann (www.bachmanntrains.com) has released its Spectrum® series Birney Safety streetcar with DCC for speed, direction and lighting control. It has a dual-mode NMRA-compliant decoder with an 8-pin plug to accommodate an after-market sound system. The HO scale car has working trolley poles, and a precision can-motor with gearing engineered for realistic slow speed operation. Additional features include all-wheel drive and a detailed painted interior with LED lighting. In addition to the Philadelphia version shown here, the Birney is currently available decorated for city street car systems on the Baltimore, Sacramento, New York & Queens, and the Third Avenue (NYC) Railway System. The ready-to-run model has an MSRP of \$160.



Bachmann is selling a DCC-equipped HO scale version of an Alco-built RS-3 diesel switching locomotive decorated for several different road names including the yellow and black Rio

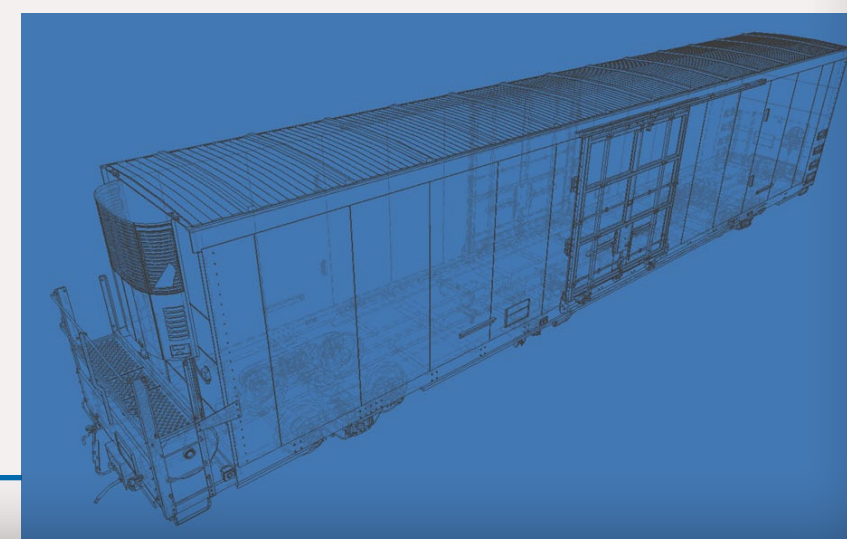


Grande seen here. Additional liveries currently include Boston & Maine (maroon, yellow & black), Western Maryland (speed lettering, black & yellow), Southern (black, gray & gold), PRR (black with yellow lettering), and NYC (black with lightning stripe). The ready-to-run models feature road-specific headlights, a dual-mode NMRA-compliant decoder with 8-pin plug, all-wheel drive, can motor, helical-cut gears, die-cast chassis, metal cut levers, and blackened metal wheels.



An HO scale kit for Higgenbotham's Coal & Sand is scheduled for release by **Bar Mills** (www.barmillsmodels.com) in April. The layout of the little industry is flexible and can be arranged to serve both rail and vehicle traffic. Depending on how they are positioned, the office, work/storage shed, and coal trestle require an area of approximately one square foot. Features of the limited-edition 1-in-500 kit include Northeastern Scale Lumber's "Hi-Def" windows and a newly-developed paper/corrugated material that looks like traditional corrugated metal but is said to be much easier to paint and weather. The craftsman-type kit comes with both white metal and resin cast details including two conveyor belt assemblies. Higgenbotham's is priced at \$99.95

Here's an X-ray look of the unique Trinity 64' reefer/boxcar coming from **BLMA** (www.blmamodels.com) in the second quarter of 2011. BLMA will offer 24 unique road numbers for the huge Union Pacific-ARMN cars. The ready-to-run models will be available in HO scale at \$29.95 with the N scale version listing at \$24.95 each.



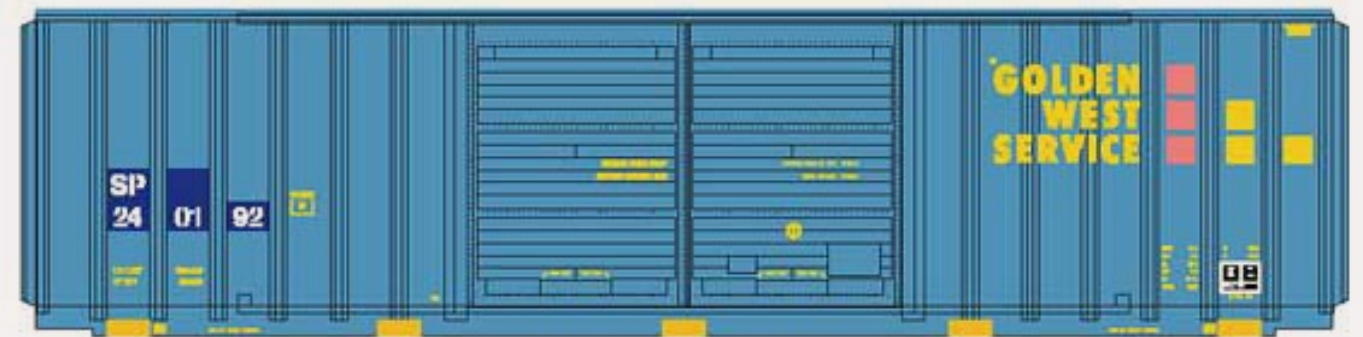


Broadway Limited Imports (www.broadway-limited.com) is selling this HO scale Southern Pacific Daylight version of a Lima-Built GS-4 4-8-4 Northern steam locomotive. The model is also available in the red, white, and blue paint of the American Freedom Train. The ready-to-run model comes with Paragon2 sound and DC/DCC operation at \$449.99 and standard DC with no sound at \$379.99. A model created from this same tooling was previously marketed by Precision Craft Models.



Fox Valley Models is preparing tooling for both HO and N scale versions of a Baltimore & Ohio class M-53 wagontop boxcar. Two versions of the car are scheduled for release in June. One will have a flat steel door and be decorated in the original B&O scheme without a dome herald. The second car, also coming in June, will have a Youngstown door and large billboard lettering with a small capitol dome on the right side. Two additional wagontop cars coming in July will both have flat doors. One will be decorated with the 13 Great States herald and a capitol dome on the right. A B&O wagontop Railway Express Agency car with a green body and yellow lettering is also due in July. Each version of the M-53 will be offered in three different road numbers. The HO models are priced at \$30.95 and will have wire grabs, a detailed underframe, metal wheelsets, and Kadee® couplers. For reservations visit www.foxvalleymodels.com.

Hunterline (www.hunterline.com) has kits for a 170' Howe-truss bridge for several popular scales. Construction materials include nut/bolt/washer castings, metal rods, strip basswood, and white pine ties (N scale ties are basswood). A proper size drill bit for the rods is included along with assembly instructions and full-size templates. The N scale model is 12-3/4" long and is priced at \$125; HO scale is 23-27/64" at \$190, S scale is 31-7/8" at \$230, and the O scale is 42-1/5" at \$300. The manufacturer says the S scale version provides sufficient clearance for On30 equipment.



InterMountain (www.intermountain-railway.com) has released an FMC 5283 boxcar in four new paint schemes including Southern Pacific (faded blue body, Golden West Service) above, Southern Pacific (freight-car red with silver roof and Eagle Pass logo), Burlington Northern (green body with oxide red doors), and GATX-de Mexico Ferroquadrum (Hydro Cushion slogan). The ready-to-run cars have an MSRP of \$31.95.

New ready-to-run HO scale models from **Kadee Quality Products** (www.kadee.com) include this glacier green 50' Great Northern PS-1 boxcar that features a cushion underframe and 10' foot Youngstown doors.



Also new are a St Louis Southwestern-Cotton Belt 40' PS-1 boxcar with an 8' Youngstown door and a B&O covered hopper with notched roof hatch covers in light gray alkali-resisting paint. Kadee has scheduled a May delivery date for one of its standard 50-ton open-top 2-bay hoppers painted in boxcar red and decorated for ATSF road number 78130. The car will come with Kadee's 2-piece, self-centering trucks and be priced at \$42.95.

Motrak Models (www.motrakmodels.net) has released a new HO scale structure kit for The Supply Shed, similar in appearance to the model shown in our S scale report, except that the walls are cast in Hydrocal®. In addition to the plaster walls, the kit includes roofing material, Tichy windows and door, Grandt Line detail parts, pallet templates, and instructions. The kit is priced at \$25.

Rapido Trains

(www.rapido-trains.com)

has scheduled another production run of its wide-vision caboose in two of its best selling road names: CP,

and CSX "Safety First" (above). The HO scale models feature track-powered interior lighting and working marker lights that can be switched on and off by a magnetic wand (included). Interior details include cupola handrails and chairs with see-through arm rests plus Rapido's abundantly-detailed underbody. The MSRP of \$74.95 reflects the cost increases being imposed by Chinese manufacturing contractors on all North American brands.



Coaches in Rapido's HO scale Super Continental Line will be available this summer for Canadian Pacific (silver/maroon) above, Canadian Pacific (silver/action red), and Algoma Central (silver), plus a rerun of two Erie and Erie-Lackawanna 10-5 sleepers: Pride of Youngstown and Spirit of Youngstown. The floor of the model has

been reengineered to minimize warping and to latch more firmly with the body sides. The MSRP for both car types is \$69.95. The coaches will be ready this summer with the sleepers scheduled to arrive in the fall. Visit www.rapido trains.com to select car numbers and place reservations.



Canadian-based Rapido says its new HO scale wood reefer is just the first of a series of American prototype transition-era freight cars it will produce. The new product line will be identified as "Rapido USA."

As a follow up to the photos of pre-production samples of the new 37' wood reefer we published last month, here are details on the road names of the initial production run of the car as built by General American Transportation (GARX) from 1937 through 1940: Swift (built 1937 with 1950 scheme on red body) above, American Stores (built 1937, mid-late 1950's scheme), Dubuque (built 1937, mid-late 1950's scheme with large herald), Dugdale (1939 as delivered scheme), GARX - Refrigerator (1939 as delivered scheme), Hormel (1937 as delivered scheme), Hygrade's (built 1940, mid-late 1950's scheme), Kingan (1940 as delivered scheme with large herald), Morris Rifkin (1940 as delivered scheme), Oscar Mayer (built 1939, late 1940s scheme with large herald), Tobin Packing (built 1937 as delivered scheme) URTX - Refrigerator (built 1938 as delivered scheme). Fully decorated ready-to-run reefers and an unlettered RTR version painted GARX yellow-orange with freight-car red ends (item 121098) will have an MSRP of \$39.95. An undecorated kit (item 121099) will be available at \$34.95.

Availability is expected late this year, however, interested modelers should place their reservations now with their favorite dealer because Rapido's manufacturers will produce only enough to meet reserved quantities.

Rib Side Car Company (www.ribsidecars.com) is selling an HO scale Milwaukee Road 40' boxcar with double doors and full length ribs. The prototypes were built in Milwaukee's own shops using a rectangular panel roof, Superior doors, 5/5

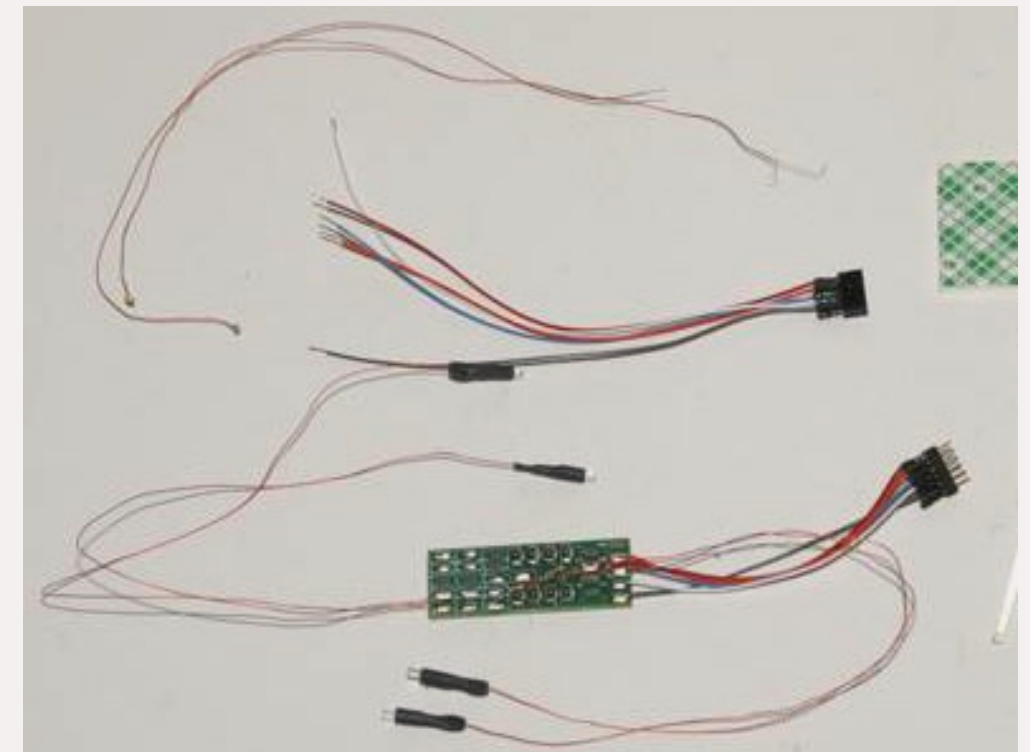
Dreadnaught ends with a lumber door, and a mix of wood and metal running boards. When new, the cars were decorated with a tilted CMSTPP herald on the left and Route of the Hiawathas slogan on the right. The kit sells for \$19.39 and is available direct or through your favorite hobby store.



Photo courtesy of Tom Wercl

decorated for Delaware & Hudson, D&RGW, Great Northern, and NorthWestern Pacific (green body). The ready-to-run model features Murphy ends, Superior doors, machined metal wheels, and knuckle couplers. The MSRP is \$19.95.

Ulrich Models (www.ulrichmodels.biz) has an LED upgrade kit to replace the incandescent bulbs on Athearn SD70ACe locomotives. In addition to providing a brighter, more prototypical light, the installation of LEDs virtually eliminates the need to ever replace a burned-out bulb. During the installation process, the decoder wiring can be modified to provide flashing ditch lights if desired. The addition of a connector between the decoder and LEDs allows future shell removal without having to deal with awkward hard wires between the shell and decoder. Although thoroughly documented, the installation requires some modeling skill to complete. Ulrich says the kit will also work for the Athearn SD70M and SD75I Genesis models with a Soundtraxx GN or AT decoder installed. It can be adapted to other decoders but it will not work with the Athearn Genesis DCC-ready board.



River Point Station (www.riverpointstation.com) has 1/87 scale models of 2008 Ford F-250 and F-350 Super Duty 4x4 pickup trucks. The F-250 SRW features a Super Cab and long pickup box (above left). The F-350 DRW has a Super Cab and long dually pickup box (above right). The models are composed of ABS molded plastic components and come authentically decorated to the prototype truck. Chrome parts including grilles, bumpers and wheels, are effectively simulated using a low-luster finish. Ron Elsdorfer reports that the factory-assembled models have clear, tinted window inserts and range in price from \$18 to \$20. Undecorated kits are available at \$12.

No firm delivery dates yet but among the future 1/87th scale vehicles coming from River Point Station are this 1950 Ford Fordor, a Dodge Ram 1500 pickup, and a 2009 Dodge Challenger.



Roundhouse division of Athearn (www.roundhousetrains.com) has scheduled an August delivery date for a generic HO scale 40' double-sheathed wood boxcar

VectorCut Models (www.vectorcut.com) has an assortment of finely-detailed, laser-cut gingerbread trim pieces to enhance Victorian-era structures. The photo here shows Walther's HO scale "Aunt Lucy's House" after being tricked-out with items from Vector's gingerbread kit. The kit has enough material to alter most single-family dwelling including 80 scale feet each of multi-purpose trim, decorative eave trim, and



roof spandrels, plus dozens of post brackets and 53 scale feet of porch railing balusters. The kit sells for \$14.75 postage-free anywhere in the world.

N SCALE PRODUCT NEWS



Athearn (www.athearn.com) is quoting a September delivery date for N scale commuter train sets that will consist of an F59PH locomotive, two coach cars, and one cab car for push-pull operation. In addition to the colorful Minnesota Northstar scheme shown above, road names will include Cal Train, GO Transit and Metrolink. The commuter sets have an MSRP of \$199.98.

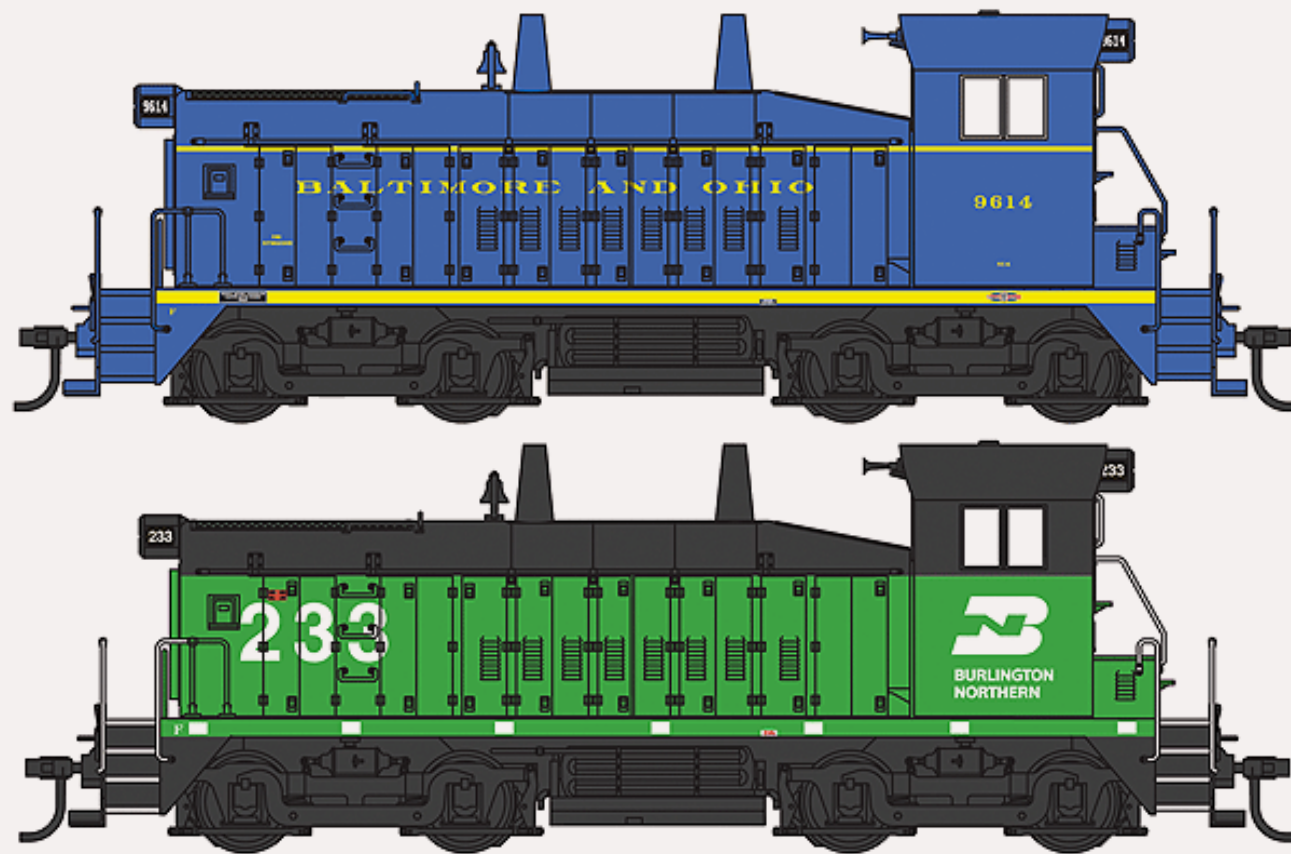
BLMA (www.blmamodels.com) will begin delivering its N scale ACF 70-ton 52' gondola in March in six road numbers each for PRR, SP, Wabash, and Penn Central at \$21.95 each. Features include an etched-metal brake platform, body-mounted couplers and BLMA's new 70-ton ASF friction-bearing trucks. Also coming in March is the second run of PS-4000 covered hopper in N scale with body-mounted couplers, etched-metal roof walks and BLMA 100-ton trucks. Priced at \$24.95, road names will include Burlington Northern (gray), Burlington Northern (simple scheme), Chicago Great Western, Chicago North Western, Chesapeake & Ohio, Frisco (SLSF), and Rock Island.

DeLuxe Innovations (www.deluxeinnovations.com) has scheduled a June delivery date for a unique limited-edition of N scale Twinstack 5-unit container well-cars decorated for Panama Canal Railway. Three sets of the 5-unit cars will be available with different road numbers at \$94.95 per set.

As mentioned in our HO scale report, **Fox Valley Models** is cutting tooling for both N and HO scale versions of a Baltimore & Ohio class M-53 wagontop box-car. The N scale models will feature etched metal running boards, Micro-Trains® body-mounted couplers, and Fox Valley metal wheels. They will be priced at \$19.95. For reservations visit www.foxvalleymodels.com.

InterMountain Railway Company (www.intermountain-railway.com) has released its N scale FP7 and F7B units decorated for Chesapeake & Ohio.

The A and B units are powered and are priced at \$119.95 and \$84.95 respectively. The DCC-ready models feature etched-metal grilles, wire grab irons, and Micro-Trains® couplers.



Late this September, **Walthers** (www.walthers.com) is scheduled to deliver a limited run of Proto2000 EMD SW9/1200 diesels equipped with DCC and QSI® Sound at \$259.98. Standard DC versions of the HO scale ready-to-run model will be priced at \$169.98. The switcher is engineered to operate reliably at speeds as low as 3 mph. Other features include over 60 factory-applied details plus a pack of optional details modelers may add if desired. Road names include Milwaukee Road, PRR, and B&O and BN as seen here.

A recent update on Walthers delivery schedule for its stunning PRR Broadway Limited models shows the kitchen-dormitory car (Budd job 9665-024) arriving this month followed by the Rapids series 10-6 sleeper (P-S plan 4129, lot 6792) in April.

Arriving in May are the Harbor series 2-bedroom buffet-lounge (P-S plan 4141, lot 6792) and Creek series 12 Duplex, 4-bedroom sleeper (P-S plan 4130, lot 6792) as shown at bottom.





Also new from InterMountain is a Trinity 5161 3-bay covered hopper car decorated for Kansas City Southern in 12 numbers, plus this unique GATX-Make A Wish car in a single road number. The N scale models feature etched-metal roof walks and Micro-Trains® trucks and couplers. Both models have an MSRP of \$21.95.

Kansas City Southern's classy "Southern Belle" scheme will be among the N scale SD70ACe locomotives **Kato USA** (www.katousa.com) will release this summer. The mix of new and previously-released models with new road numbers will include Union Pacific (flag scheme), BNSF (swoosh scheme), and CSX. Kato has confirmed that re-runs of currently sold-out SD70ACe models will be scheduled for George Bush #4141 and UP in the D&RGW-Heritage scheme.



Micro-Trains Line Company (www.micro-trains.com) has set a July date for the release a five-car set of N scale ATSF plug-door boxcars decorated with vintage Santa Fe travel posters. In addition to the Chief Way and Grand Canyon shown above, Navajo Land, Red Cliffs and Hopiland will complete the set of full-color posters that celebrate the native culture of the Southwest. The limited-edition set will be priced at \$119.95.



N.J. International, Inc. (www.njinternational.com) has set an April delivery date for a new N scale 20-yard roll-off trash sled. Features include both interior and

exterior detailing, latched door, and roll-off wheels. A package of two sleds (one of each color) is priced at \$29.99.



Rapido Trains (www.rapidotrains.com) has announced three new paint schemes for its N scale Panorama Line of Dayniter coaches. In addition to the CN wet-noodle version shown here, other liveries will include CN (1954 scheme), and VIA Rail Canada – the original owner of the distinctive cars. Reservations are being taken now for delivery this fall. Cars in Rapido's Panorama series feature an extensively-detailed underbody, body-mounted Micro-Trains® couplers, insulated 36" metal wheelsets, flush windows with painted gaskets and shades, diaphragms with etched brass end-gates and separate suspension rods, and Rapido's unique "Easy-Peasy" battery-powered interior lighting. The MSRP is \$52.95 each.

Trainworx (www.train-worx.com) is accepting orders until the end of March for five new paint schemes on its N scale all-steel class GS drop-bottom gondola. Roads will include Chicago Burlington & Quincy, Great Northern (1950s red scheme), Great Northern (1960s red scheme), Great Northern (1960s black scheme), and SOO line. The GN car comes in six numbers while the SOO and CB&Q models are available in 12 different car numbers. The ready-to-run styrene models feature a die-cast metal underframe, etched-metal brake platform, separate ladders, stirrups, and grab irons. Delivery is expected in August.

NEW DECALS

Jerry Glow (www.home.comcast.net/~jerryglow/decals.html) has new HO scale decals for Illinois Central refrigerator cars.

New decals from **Microscale** (www.microscale.com) include data sheets for EMD SD70ACe and SD70-2 locomotives (MC-5016), plus both black (MC-4035) and white (MC-4247) data sheets for centerbeam flat cars – all in HO scale. Also new are decals for Great Northern ACF Centerflow and P-S covered hopper cars

in HO (87-1336) and N scale (60-1336). Each GN sheet includes both black and white goat heralds.

Mindspring Decals (home.mindspring.com/~paducah) has authentic decal sets for HO scale GATC 2600 Airslide hopper cars. According to Dan Kohlberg, the decal sets are suitable for Athearn's 87537 and 87500 undecorated kits. Road names currently available include B&O, PRR Leased, PRR-SK2b, PRR-PK, National Biscuit Co., Quaker Oats, Nebraska Consolidated Mills, ICG, Illinois Central, Norfolk & Western, Nickel Plate Road, and Wabash.

Mount Vernon Shops (www.mountvernonshops.com) has new decal sets for PRR covered hoppers before the introduction of the shadow keystone scheme. Set HO-H25 has enough material for lettering four class H25 or H25a hopper cars. Set HO-CLO will letter up to six GLe, H30, H30a, H32 or H33 cars. Each set includes repack and reweigh names for locations throughout the Pennsy system.

INDUSTRY NEWS

Champaign, Illinois: Athearn division of Horizon Hobby Trains, has a career opportunity for a model railroad content specialist to help develop product, multimedia content, and communicate on the firm's social media site. For more information, send an application and resume to: Human Resources Department Horizon Hobby, Inc. 4105 Fieldstone Road Champaign, IL 61822 or Email it to: apply@horizonhobby.com.

Milwaukee, Wisconsin: Wm. K. Walther, Inc. is now the North American distributor for the German line of Brekina 1/87 scale vehicles. In addition to European prototypes, Brekina offers HO scale models of many American vehicles including a Ford Econoline van, Chevrolet Corvan, 1964 Dodge A100 van shown for the first time at the recent Nuremberg Toy Fair, a 1970-1973 Chevrolet Camaro, and 1959 Chevrolet El Camino. The Camaro and El Camino will be released for shipment immediately and the A100, in both passenger and commercial van styles, will be released this spring. Pricing is expected to be announced soon.

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About our news and events editor



Richard Bale writes our news column under the byline of *The Old Yardmaster*. He has been writing about the model railroad trade for various hobby publications since the 1960s.

He enjoys building models, particularly structures, some of which appeared in the June 2006 issue of *Model Railroader* magazine.

When talking to hobby vendors, please remember to mention MRH.



Selected Events

March 2011

CALIF., SANTA ROSA, NMRA PCR 67th Annual Convention, Finley Community Center, 2060 W. College Ave. Info at www.pcrnmra.org.

CALIF., STOCKTON, March 12, Winterail2011, 3rd Annual Railroad Photography Exposition & Railroadiana Show, Scottish Rite Masonic Center, 33 W. Alpine Ave. Info at www.winterail.com.

CANADA, ONTARIO, TORONTO, March 19, Toronto Railway Prototype Modellers Meet. Clinicians include Mike Salfi, Efram Ellenbogn, Al Crisp, Terry Hughes. Humber College, North Campus, Building B, Rooms B201-B202, 205 Humber College Blvd. Info at www.facebook.com/event.php?eid=153274941393260.

GEORGIA, PORT WENTWORTH (SAVANNAH), March 25-26, Savannah Prototype Modeler's Meet, Port Wentworth Community Center, 102 Turnberry St. Info at www.savannahrpm.com or send email to Bob Harpe at rbharpe@comcast.net.

ILLINOIS, LOMBARD, March 11-13, Chicago O Scale Meet, Westin Lombard Yorktown Center. Info at www.marchmeet.net.

NEW JERSEY, CLARK, March 6, Jersey Central Railroad Historical Society Train Show. Jersey's largest train show with railroadiana items plus model displays and operating kids layouts. Mother Seton High School, on Valley Road at Garden State Parkway exit 135. For information contact Mitchell Dakelman at dakelmanm@aol.com.

OHIO, CANFIELD, March 24-26, Midwest Narrow Gauge Show, South Range Middle School Building, West South Range Road. HQ at Hampton Inn, Route 11, Canfield.

OKLAHOMA, TULSA, March 18-20, 2nd Layout Design and Operations Weekend Meet. Speakers include Tony Koester, Doug Gurin, Keith Robinson and Riley Triggs. Shriner's Temple, 28th & Sheridan. Info at <http://ldopsigmeet.tulsanmra.org/>.

OREGON, ELSIE, Mar 5, 2011 Pacific Model Loggers' Congress, Camp 18 Restaurant & Logging Museum. Includes clinics and model contest. Info from www.pacificmodelloggerscongress.com.

PENN., GREENBURG, March 25-26, RPM-East. Seminar presenters include Keith Albright, Art Biehler, Andy Blenko, Brian Carlson, Ted Culotta, Jim Dalberg, Keith DeVault, Larry DeYoung, Paul Dolkos, Gary Dunmire, Bruce Elliott, Dick Flock, Nick Fry, Steve Funaro, Paul Gallick, Eric Hansmann, Roger Hinman, Ben Hom, Bob Karig, Larry Kline, Bob Leverknight, Ramon Rhodes, John Roberts, Steve Ross, Jim Ruffing, Stan Rydarowicz, Mike Schleigh, Mont Switzer, Chip Syme, John Wesner, and Tom Wilson. Shearaton Four Points Hotel. Info at www.hansmanns.org/rpm_east/2011.htm.

PENN., MONACA, March 13, Beaver County Spring Model Train Show, Center Stage, 1495 Old Brodhead Road. Info at www.bcmrr.railfan.net.

April 2011

AUSTRALIA, NORTH IPSWICH, April 23-24, 10th Australian Narrow Gauge Convention. Speakers include Grant McAdam and Gavin Hince and Gerry Hopkins. At Workshops Rail Museum, North Street. Info at www.theworkshops.qm.qld.gov.au.

CANADA, ALBERTA, CALGARY, April 16-17, SuperTrain 2011, Canada's largest model train show with manufacturers displays, live demos, clinics, photo gallery. Subway Soccer Centre, 7000 48 Street SE.

MAINE, GRAY, April 2, 4th Annual Maine Narrow Gauge Show. Clinicians include George Barrett, Bruce Nickerson, Bob Willard, and Alan Carroll. Gray-New Gloucester High School, 10 Libby Hill Road (off route 26).

MARYLAND, TIMONIUM, April 9-10, Great Scale Model Train Show & Railroad Marketplace, produced by Howard Zane and Ken Young, Maryland State Fairgrounds.

MASSACHUSETTS, SHIRLEY, April 10, Railfair 2011 Model Train Show and Open House. Exhibits, dealer displays, and clinics, sponsored by Nashua Valley Railroad Assn., Show at Shirley Middle School, 1 Hospital Road. Open House at NVRR Association Quarters, Unit E-205, Phoenix Park Complex, 2 Shaker Road. Details at www.nvrra.com. Additional details at www.nvrra.com.

Future

CALIF., SACRAMENTO, July 3-9, NMRA National and National Association of S Gaugers Combined Conventions, Sheraton Grand Hotel. Info at www.x2011west.org.

CALIF., SACRAMENTO, July 7-9, National Train Show, Sacramento Convention Center. Info at www.x2011west.org/trainshow.html.

Selected Events *Continued ...*

CALIFORNIA, SAN DIEGO, June 20 - July 29, Railroad Summer Camp for Kids, includes museum tours, railroad history, railroad workbooks, railroad safety education, diesel/steam engine mechanics, and assembling model railroad freight car. Registration is now open for six 5-day sessions in three different age groups in grades 1 through 8. San Diego Model Railroad Museum, 1649 El Prado, Balboa Park. Details from Olga Cortes at 619-696-0199 or visit www.sdmodelrailroadm.com/#/summer-camp/4533422272.

COLORADO, LITTLETON (DENVER), June 10-13, 5th Annual Rocky Mountain RPM Meet, Littleton Baptist Church, 1400 W. Caley Ave. Info at <http://rocky-mountainprototypemodelers.org>.

ILLINOIS, NAPERVILLE, Oct, Naperville RPM Meet. Specific date and location are pending.

MARYLAND, TIMONIUM, June 25-26, Great Scale Model Train Show & Railroad Marketplace, produced by Howard Zane and Ken Young, Maryland State Fairgrounds.

MASS., MANSFIELD, Nov 7-9, Craftsman Structure Convention, Holiday Inn. Info at www.csc11.net.

MASS., PEABODY, Oct 13-15, The Fine Scale Model Railroader Expo, Holiday Inn. New event includes extended paid clinics from experts including Lou Sassi, Dave Frary, Bob Hayden, and Bob Mitchell. For clinic costs and additional details visit www.modelrailroadexpo.com.

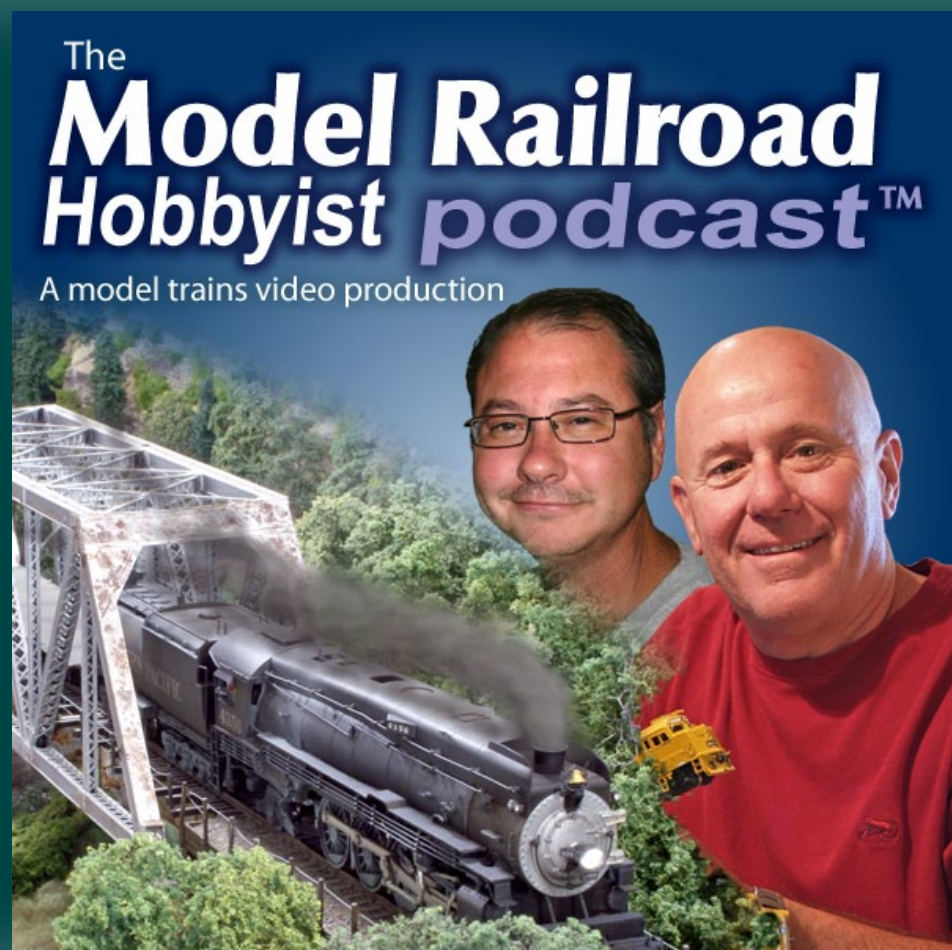
N. CAROLINA, HICKORY, Sep 7-10, 33rd National Narrow Gauge Convention, Hickory Metro Convention Center, featuring layout tours, clinics, vendor displays, prototype events and narrow gauge camaraderie. Speakers are Trains editor Jim Wrinn and David Pfeiffer from National Archives. Headquarters hotel (Crown Plaza) has sold out. Visit web site at www.narrowgauge2011.com for information on alternative hotel space.

OHIO, MARION, May 20-22, Central Ohio Prototype Modelers Meet, Marion Union Station.

PENN., KIMBERTON, May 19-22, Annual Mid-Atlantic Narrow Gauge Meet, Kimberton Volunteer Fire Department Building.

PENN., HERSHEY, June 22-26, National N Scale Convention. Harrisburg/Hershey Sheraton Hotel, 4650 Lindle Rd., Harrisburg. Info at www.nationalscaleconvention.com.

WEST VIRGINIA, CASS, May 20-21, Titans of Mountains - 2011 Cass Railfan Weekend. Details at www.msrlha.org/rfw/index.html. ■



Don't miss the MRH podcast each month!



Click for more

About the Publisher



Joe Fugate is the featured expert in many [Model-Trains-Video.com](#) videos, and he's also the founder and publisher of **Model Railroad Hobbyist Magazine**.

To learn more about Joe, [click here](#).

PUBLISHER'S EDITORIAL: Having Fun With Trains

Musings from the MRH founder



If you're not having fun doing the hobby, then why are you doing it?

As a publishing business about the hobby of model railroading, we've done our share of head scratching on how to best communicate our philosophy and passion for the hobby. Whatever we choose as our values statement, it needs to be short and to the point, yet communicate volumes about who we are.

After much debate among the staff, we've finally settled on *Having Fun With Trains*.

We believe the "fun" part of the message is vital. After all, if a hobby's not fun, why are you doing it?

We think this "slogan", coupled with our Model Railroad *Hobbyist* name tells you a lot about us.

First, our focus is a passion for the hobby of model railroading, with the number one goal being to have lots of fun in the process. We believe it's the interesting things *modelers* are doing with the hobby stuff and not just the

stuff alone that makes for the most interesting content.

An "it" alone can't have fun or do interesting things. The hobby is people having fun doing and interacting.

To add to the doing part, remember one of model railroading's distinctive's is *people make the trains do stuff*.

That's why we do our layout articles interview style and why we like to include a video interview with the

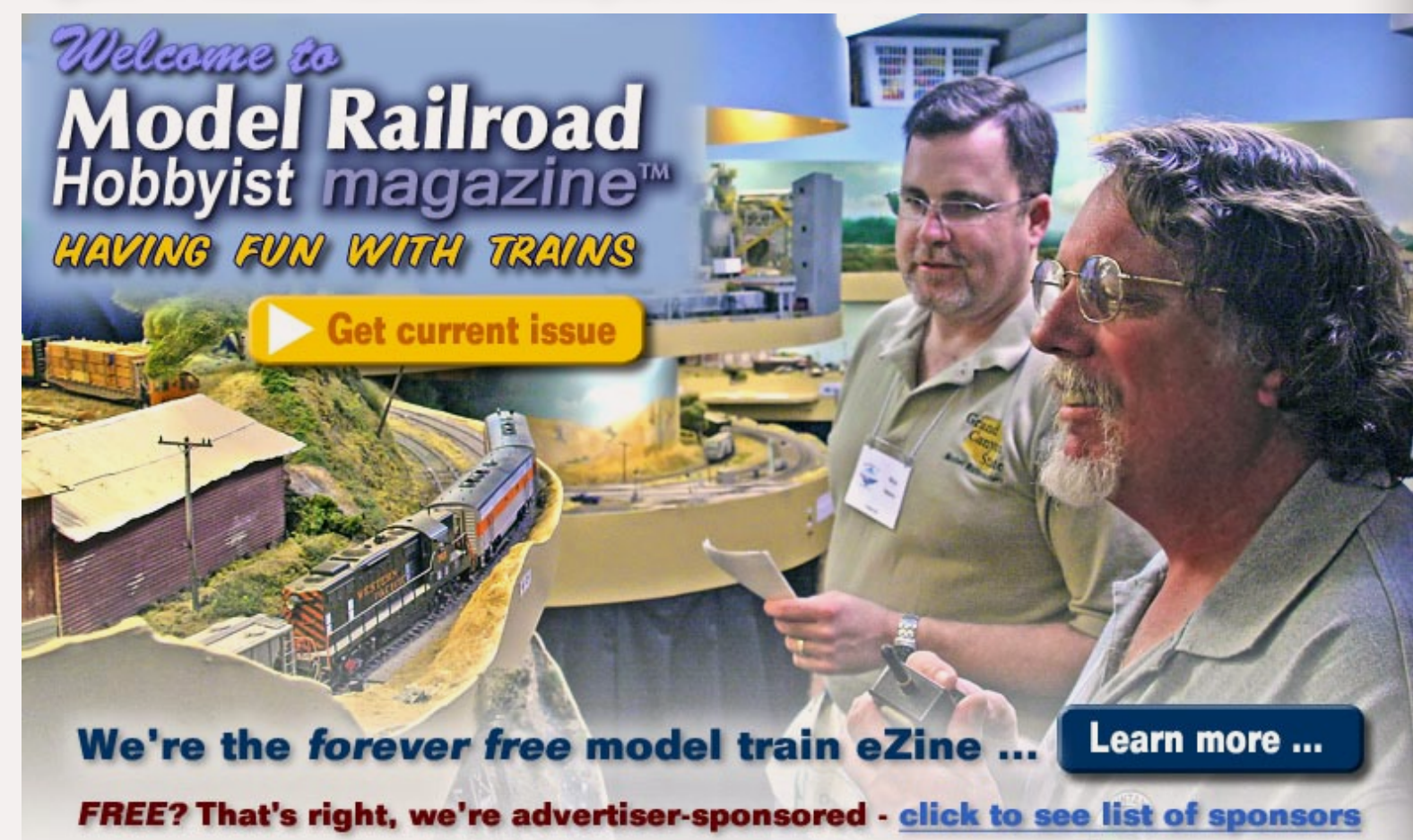
owner if at all possible. It's the interaction with other modelers and what they're doing with the trains that makes the hobby the most interesting.

"It's the interaction with other modelers and what they're doing with the trains that makes the hobby the most interesting."

And the best medium for showing the dynamic doing part in all its glory is video – not static ink on paper. What better delivery

mechanism is there today for video than the global internet? And as if that's not enough, it's free besides!

Figure 1: Model Railroad Hobbyist's new web site look and slogan.



Who is reading MRH?

Take our 2011 reader survey and let's find out* ...

* Once we've collected our desired number of responses, we will publish the results. The more responses, the sooner you'll see the results!

Take the survey

Figure 2: We took our last reader survey way back in 2009. With our site traffic now pushing 50,000 per month, it's time for a new survey. Please click the button and let us know what you think!

How many times have you read a layout tour article where it said: "I built the layout with wood, I used plaster for the scenery, and I use electricity to run the trains ...". Have you ever wanted to see the trains moving, or longed to see the big grin on the owner's face while they bring their creation to life?

One of the main reasons you are interested in a magazine article or a post on a web site is because you want to see what the other guy is doing that's unique and different. You're hoping you can extract some great new ideas for your own hobby pursuits – right?

I know that's why *I read articles* and watch hobby videos.

At the end of the day it's pretty simple – if you're not having fun with your trains, then it's time to go do something else!

MRH 2011 Reader Survey

You can help us make sure MRH is giving you what you need by taking our 2011 Reader Survey. Tell us what parts of the hobby most interest you.

The survey will take you less than 10 minutes to complete and it's completely anonymous. [Click here to access the 2011 reader survey](#), and we thank you in advance.

We've also upgraded our web site to have a fresh look, and changed our front page to emphasize our new *Having Fun With Trains* summation of what we're all about. Make sure you stop by and check out our new look!

Reader Feedback
(click here)

Some of the finest trees in the hobby ...

... available in any scale!

CANYON CREEK SCENICS
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click to visit our web site

REVERSE RUNNING: Cheap Freight Cars Galore!

Stepping outside the box with a contrary view



— by Joe Fugate

In the 1980s it was not unusual to find HO freight cars costing less than \$5 each, and the cost of equipping a large layout with 500 freight cars (hypothetically) was about \$2500, spent over a period of time as you acquired the cars.

Today with the “average” HO freight car costing around \$20, the same 500 freight cars are going to cost you \$10,000 – yikes! Is this raising the cost of

entry into the hobby out of the reach of most newcomers?

First, consider that today’s youngsters don’t even blink at the cost of computer games – \$20 - \$50 each is common. I would think \$20 for a piece of model railroad-rolling stock isn’t going to slow them down much if that’s what interests them.

True, I can recall buying Athearn blue box car kits in the late 1960s for \$2, but what would today’s \$20 freight car have cost back in 1965?

If I use the “Measuring Worth” web site:
<http://www.measuringworth.com>
... I find that today’s \$20 freight car would have cost \$2.94 in 1965.

About \$3 for today’s much better detailed freight car with knuckle couplers and much finer, more correct details? Wow! It looks like today’s prices are right in line with where they’re supposed to be.

I think part of what happened is vendors like Irv Athearn kept the lid on prices longer than they perhaps should have, and after Irv’s passing in the 90s, the lid got removed and prices jumped to where they should have been all along, adjusted for inflation.

But still, the question remains – what can you find at “bargain basement” prices when shopping for rolling stock? Has the \$15 or less freight car disappeared off the market?

Well, let’s take a look.

If I check on some MRH sponsor web sites for brand new freight cars under \$15, I can find hundreds of them spread across the web sites of Dallas Model Works, Micro-Mark (look under kits), and Walthers.

That’s for freight cars costing less than \$15 each (\$12 - \$14.99). What if we insist on even cheaper prices, like less than \$10 per car?

If I go do a search on eBay, I can find over *two thousand* pieces of HO rolling stock on sale for less than \$10 - many of them the fabled Athearn blue box models.

In fact, I would suspect there’s enough unbuilt Athearn blue box kits in people’s stash to keep eBay supplied for the next couple of decades with affordable rolling stock models!

So there are thousands of very affordable freight cars for sale if you search through online channels.

It’s worth mentioning, you’re getting what you pay for. These cheap models generally have bulky molded-on detail and the car paint scheme may not always be the most accurate.

Many of these less costly cars come with plastic horn-hook couplers and plastic wheels. Once you factor in the cost of knuckle couplers, metal wheelsets and correcting the bulky details, that \$20 price doesn’t look so bad.

Still, there’s room for what I would call “fleet cars” – cars that help bulk out your trains and are more affordable. A little weathering goes a long way with these cars.

Has the market for cheap freight cars changed? Definitely. Has it gone away? Not at all!

There are thousands of these cheap cars still for sale online. It’s what I would call: cheap freight cars galore! ☑

Clickable Advertiser Index	Page
Accu-Lites	22
Alpine Division Scale Models	17
Aux Box DCC.Com	35
Backdrop Warehouse	16
BLMA	3
BPL Brassworks	20
Canyon Creek Scenics	118
Clever Models	29
CMT	25
Craftsman Structure Convention	30
Dallas Model Works	4
DCC by Design	28
DCC Supplies	34
ExactRail	5
Fast Tracks	9
Fine Scale Model Railroader Expo	104
FosScale Models	28
Imagine That Laser Art	32
Iwata-Medea	23
Laser Modeling 3	49
Litchfield Station	13
Micro-Mark	28
Model Railcast Show	19
Model Railroad Tips	28

Coming in the April 2011 issue

- Dave Adam's On3 layout
- Detailing the backside of buildings
- Atlas GP7 decoder install
- Top 10 tips for using airbrushes
- Coved corners for your backdrops
- Two new one-evening projects
- An assortment of Product First Looks

... and lots more!

Clickable Advertiser Index, continued	Page
Model Trains Video	11
NJ International	50
Paw of a Bear	24
RailMaster Hobbies	26
Railroad Kits	14
RS Laserkits	19
Railpub	29
Rapido Trains	7
Rocky Mountain Modelworks	28
Rusty Stumps	50
ShelfTrax	29
Sidetrack Laser	35
Southern Digital	26
Summit	29
TAM Valley Depot	31
The Fiber Optic Store	29
Traintek	27
Train Videos and Parts	28
Walthers	10
X2011 West	29

For the love of model trains

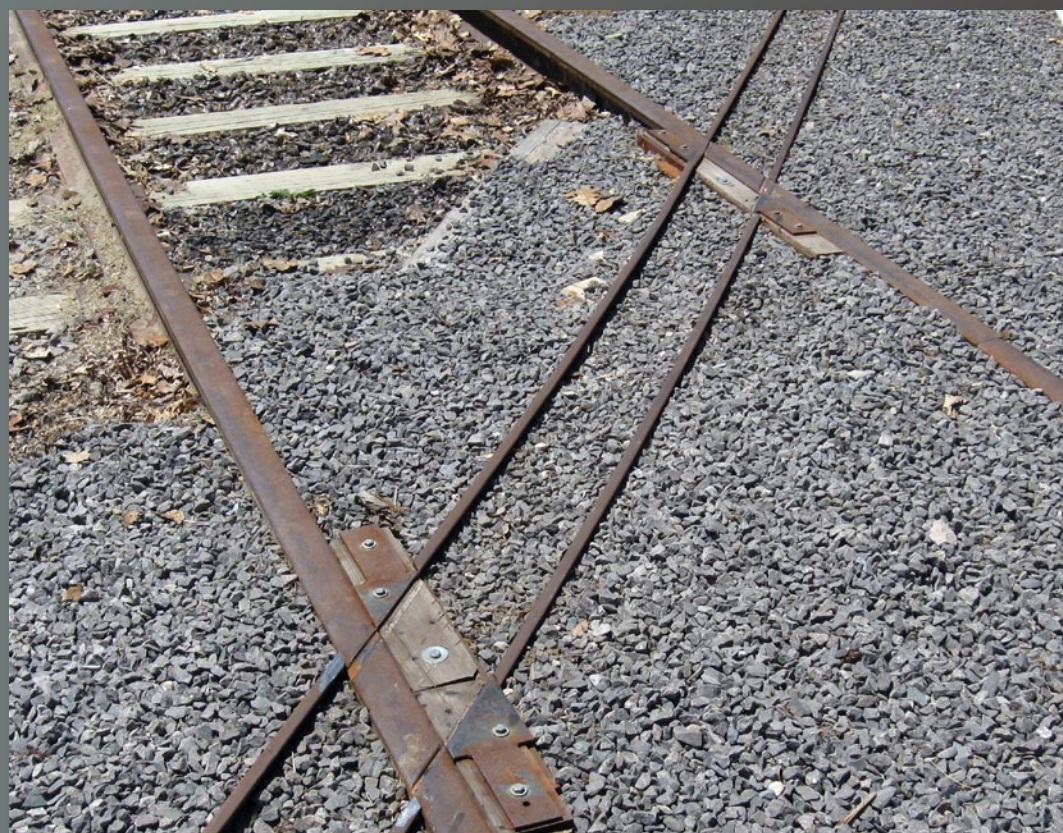


Clickable Topic Index	Page
Derailments	121
Editorial – Editor's Soapbox	12
Editorial – Publisher's Editorial	117
Editorial – Reverse Running	119
First Look – MRC HO Scale Cornstalks	81
Layouts – Lone Pine & Tonapah	36
Q and A – MRH Questions, Answers, and Tips ...	21
Rolling Stock – Comme-N-tary	95
Scenery – Aging Wood with Acrylics	55
Scenery – Build a Billboard	48
Scenery – Weathered Wood Fence	100
Scenery – West Goffs	51
Structures – Up the Creek	82
Structures – My Modular Adventure	87
Trackwork – Track is a Model Too	60
News – March Newsletter	105
Staff Notes	14
Tool Shed – Coffman Clamps	33
<hr/>	
Other – Cover	1
Other – MRH Sponsors	2
Other – Table of Contents	8

**Derailments, humor,
and Dashboard on
next page ►**

Deraillments

humor (allegedly)



Forced
Perspective?

Fred: Did you hear about the conductor who wanted to be an author? He'd be up in the cupola of his caboose writing whenever he got the chance.

Sam: Did he ever get published?

Fred: Naw, the editor said his book was crummy and that he was a real hack!

Q: What do brakemen wear to relieve the pain when their ankles start swelling up?

A: Air hose.

Q: Why don't railroad crews like to play craps?

A: They get too many boxcars!



Got a good bit of train humor? If you're the first to [submit it](#) and we use it, it's worth \$10!

**When talking to
hobby vendors,
please remember
to mention MRH.**