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Weathering an LAJ CF7

Lance Mindheim shows us how

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Old School Scenery from Sawdust

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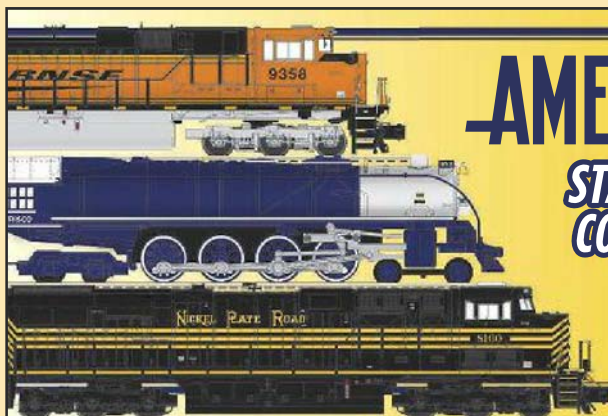
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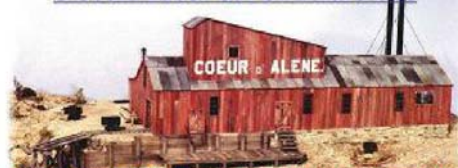


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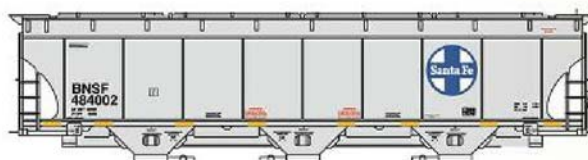
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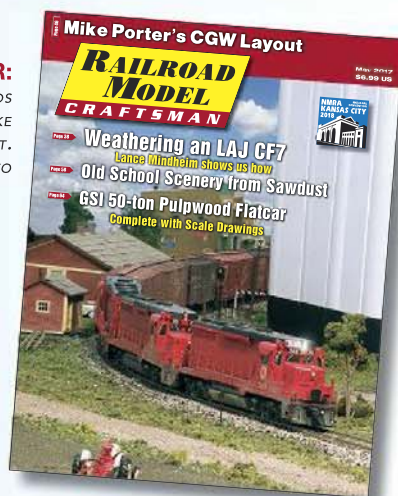
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A TRIO OF CLEAN EMD GP30s ROUNDS
THE GENTLE BEND AT MOORLAND ON MIKE
PORTER'S CHICAGO GREAT WESTERN LAYOUT.
— DAN MUNSON PHOTO



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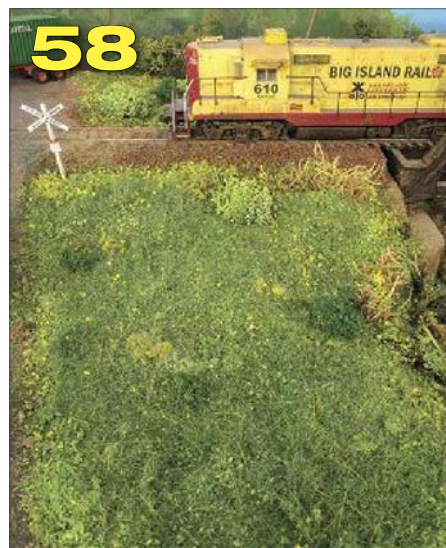
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Editor's Notebook



Are you going to finish that?

This question regularly comes to the forefront when visiting friends' layouts. I often wonder why certain projects — often simple ones — never seem to get finished. I, too, am guilty in this realm, because I have lots of stuff that has lain dormant on my layout or workbench for what seems like an eternity.

Some people believe that great model railroaders must have impressive higher thinking skills. In reality, if you want to be a really good model railroader — the sort of modeler that other modelers admire — you don't need to have an artistic background, engineering degree, or lots of money. None of those traits hurts our endeavor, but believe it or not, a little training of your brain can make you into a better modeler.

The reticular activating system (RAS) is the door, or "main line" if you like, through which nearly all information enters your brain. The RAS filters the incoming information and focuses what you pay attention to, how excited and motivated you are, and what is thrown out or ignored because it does not interest you in the least.

Your RAS responds to your name, the dispatcher calling your train number, and then saying "over," a derailed car being dragged across the railroad, and information that you need immediately. For instance, if you're looking for a decal set that you're

sure you placed on your workbench, your RAS alerts your brain to search for the blue Micro-Scale envelope — 87-585 Santa Fe GP60M Superfleet — or focus on the graphics present on the sheet, particularly the large red "SANTA FE" billboard lettering.

For us model railroaders, the RAS also responds to novelty. You notice anything new and different or unique, which is why some of us must have that Union Pacific Turbine despite being a Clinchfield modeler. However, this initial hyper-attentiveness eases with exposure and commonality. So, if you have a building with window openings but no windows sitting on your layout you will eventually become accustomed to it, and it will no longer bother you. Guess what? Each and every visitor will instantly notice because of its novelty. Interesting! By the way, the novelty thing can spin out of control, gutting your ability to create a cohesive model railroad. But that is a topic for another day.

In his book, *Getting Things Done*, David Allen discusses how this works:

"When you focus on something [the yard you're going to design, the locomotive you're about to paint, the project you want to launch], that focus instantly creates ideas and thought patterns you wouldn't have had otherwise. Even your physiology will respond to an image in your head as if it were reality."

Examples of the RAS in action would be how you notice a jacket with a CSX logo on it from across a crowded room or a copy of *RMC* on the grocery store shelves.

As David notes, "Just like a computer, your brain has a search function — but it's even more phenomenal than a computer's. It seems to be programmed by what we focus on and, more primarily, what we identify with. It's the core of what we often adopt to as the paradigms we maintain.

"We notice only what matches our internal belief systems and identified contexts."

Dr. Maxwell Maltz's book, "Psycho-Cybernetics," describes how to steer your mind to a productive, useful goal.

"Your automatic creative mechanism is teleological. That is, it operates in terms of goals and end results. Once you give it a definite goal to achieve, you can depend upon its automatic guidance system to take you to that goal much better than 'you' ever could by conscious thought.

"You supply the goal by thinking in terms of end results. Your automatic mechanism then supplies the means whereby."

You really can get what you focus on... sorta.

No, this isn't about positive thinking. It's about focusing on your goals and taking action. If you want to achieve your goals, such as building that incredible layout or learning how to program in JMRI — it doesn't matter how positive you think about it; you've got to take action for it to become a reality.

The first step, however, is thinking. Imagine, in detail, your desired outcome, such as finishing the scenery on your last 10 feet of the layout, weathering your rolling stock, or successfully programming a decoder. Make sure that your goal is well-defined and the result looks perfect in your brain. Envision every detail and keep that positive result in mind.

Now, after thinking comes the doing.

Ask yourself, what is the next action necessary to make this vision a reality? Examples might include researching how to build benchwork for the best switching layout or attending DCC clinics at the NMRA National Convention, asking the experts questions, and talking with dealers to adopt DCC for your command control system.

The most important thing is to focus on the *what* (not the *how*). In time, your RAS will show you the *how* as it gathers information to achieve that goal.

Your RAS is a great asset, but it can also hide things that need to be addressed. Remember that building with no windows I discussed earlier on my friend's layout? Just like the Febreze com-

mercial, he has become "blind" to their absence. A way to keep from having modeling blind spots is to invite a friend over, and let him or her study the layout. I guarantee that a "fresh" set of eyes will pick out things that you just cannot see anymore.

So, what are you waiting for? Envision your perfect project complete, and let your RAS begin

to identify helpful opportunities, situations, or resources to achieve that goal. Focus on that end result, so your most valuable and powerful tool (your brain) will be ready and alert, gathering clues, tips, techniques, and so much more that are relevant to your goals.

Postmarks

Send your comments to:
spriest@rrmodelcraftsman.com

Lodi Junction

Just a note to say how much I thoroughly enjoyed the feature article in the February issue — Rob Mallett's Lodi Junction. He has done an incredible job, plus also congrats to the author for both his writing and photos. This article was especially meaningful to me because I live only 15 miles from there and am always hanging out around the junction (not to mention that the local model train shop — Roger's Railroad Junction — is right across the street). I hope you can pass my congratulations along to both Rob and Brian.

AL BROWN

86-foot Boxcars

I read the article on "Upgrading Athearn 86-foot Boxcars" in the March issue, and it brought back memories of my first encounter with these big cars.

I was a new sales representative for the Southern Pacific Railroad, working out of the Los Angeles office. One of my customers in West Los Angeles was Testor Corporation. They made model airplanes, model paint, and other toy items. They shipped regularly to Rockford, Illinois. They usually shipped piggyback through a third party shipper's agent. At that time, most of the outbound piggyback traffic to the Chicago area was going Santa Fe.

We were not getting much busi-

ness. Testor's shipments were light in weight, and a standard 50-foot boxcar did not have the cubic capacity it needed for the rates charged. As it so happens, another representative in the office mentioned that one of his customers was receiving inbound shipments of paper products in 86-foot long boxcars from the Midwest. He asked if any of the other sales representatives had business going back East that could utilize one of these cars. The cars were long and had 10,000 cubic feet of capacity — twice that of a standard boxcar. I checked with our rate department and found out that there was no restriction on car size for toys and that I could use these boxcars. Everything went great. Testor's people loved the size of the car and asked that whenever one was available that they would use it. Everything was going good until General Motors informed the main office in San Francisco that it would need those cars back in their pool of specialized cars for shipment of auto parts to their three manufacturing plants in California. There went my business.

West Los Angeles is on the Santa Monica Branch outside the Los Angeles switching limits, which meant that any freight originating or terminating there would result in a line haul for the SP and a 12 percent cut of the revenue instead of just a crosstown switching fee.

At that time, we were allowed to talk with our counterparts on the other railroads. My Santa Fe counterpart was named Sandy. We occasionally spotted each other in the field. I never called his office. I explained the situation to him, and he was interested in helping out. Although Testor's shipments in the trailers were going Santa Fe, he was not getting credit for it. He checked and later informed me that they had the big cars and that one was available. I asked Testor to order the car through SP's car order desk, and then I cleared it with the desk. We got the freight back, which meant more business on a failing branch line.

I later explained this to my bosses. They were uncertain whether or not this was freight reclaimed back to the SP. However, they did agree that it was business and that 12 percent of the revenue was better than seeing the freight go Santa Fe all the way. I'm sure Sandy's bosses appreciated the "new" business. Sometimes you have to work with your competitor to get the business.

EDWARD LANGER

Photo correction

Photos of Alco FAs 4301 and 4302 on page 72 of the March issue were incorrectly credited to Bob Losse, Sr. The photos were taken by Warren Calloway. Our apologies for the error. — SMP

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When the Troops Come Marching In



Mike sez...

For many of us — dare I say a vast majority of us — model railroading is a social thing, especially for those of us who are “operation junkies,” hosting operating sessions on our layouts or attending sessions at other layouts. This has become a big thing I’ve noticed over the last 20 years or so. The social aspect can pertain to non-operational gatherings as well, such as at club meeting nights (or days) or work sessions on our layouts.

Certainly, there are some for whom model railroading is a lone-wolf experience. It’s their evening to get away from the hubris of today’s modern life and spend a few hours by themselves in their scaled-down alternative world. I do that myself sometimes, even though I like the social aspect just as much, if not more. Besides, it’s better to have friends around ready to help in

case I — being somewhat accident-prone — accidentally saw my hand off or something. I need my hands to type this silly... um, er ... essential column every month.

So, what’s the point here? Well, Bill and I are going to talk about the best ways to accommodate our visitors, whether they’re here to help work on our layouts or operate on them.

My earliest experiences in this area date from 1963 when I joined the Forest City Model Railroad Club in my hometown of Rockford, Illinois. I was 14 and just about the youngest fellow there. Being a pretty reserved kid (undoubtedly, unlike Bill), I politely just hung around until a couple of the older guys occasionally took to mentoring me on some of the basics. But there wasn’t much in the way of a structured system of teaching us young’uns about the hobby, much less operating trains. Not until future RMC associate edi-

by Mike Schafer
& Bill Navigato

Bill and Mike’s world

The North American Prototype Modelers (NAPM) group of Milwaukee, Wisconsin, has about 75 members, with anywhere from 15 to 30 attending operating sessions on the club’s huge layout. The club usually has a monthly operating session where members sign up for the job they want if attending. Generally, members with seniority get first pick, but often they will give the job to a newer member. Guests, such as Canadian National engineer Bill Beecher, right, are also welcome to operate. It’s all about having fun.

—Mike Schafer photo





tor and *Railfan & Railroad* editor Jim Boyd joined the club in 1964 was there any strong leadership. Boyd was a born leader, and he got things done with the club and its layout that otherwise wouldn't have — albeit with some consternation from a couple of members who did not take well to Jim's very strong, in-your-face personality.

At the opposite end of the spectrum, about a dozen years later when I had moved to Wisconsin to work for *Model Railroader* and *Trains* magazines in their new joint Books Department, I somehow wound up as president of the newly formed Kalmbach Model Railroad Club, the Milwaukee, Racine & Troy. Now I was, theoretically, in the charge of several personalities, nearly all of whom were experienced in modeling and/or the prototype one way or another. That made the job a cinch.

(Side note: This was not the first time this young lad had been put in charge of a renegade group

of different personalities. Before my Kalmbach days, I had done a stint as a high-school art teacher in one of the roughest schools in Rockford. Loved it, and learned a lot about leadership.)

I've been hosting work and/or operating sessions now since the mid-1980s while paying attention to how others handle such things. Everyone has a different slant, you know.

For my every-other-Friday-night I&StL work sessions (on alternating Friday nights, I head for Dixon, Illinois, to work on Mike McBride's Iron Cross layout), I looked back upon my Forest City Model Railroad Club days of standing around, wondering what I should help with. To avoid this on my work sessions, I issue work messages, usually letting attendees pick what they feel best qualified to do. These can be simple things like fixing bad-order cars or broken turnouts. But I may also assign larger projects to the more-accomplished and regular help.

For example, I've given Mike McBride — one of the most accomplished modelers I know — full rights of designing and building the G.U.S. (General Utilities Service) Belt industrial branch at Peoria on my I&StL.

Eventually, you get to know which volunteers are good at what and go from there. For example, one of my workers — who shall remain unidentified herein — is known for "iffy" trackwork, so I had him lay Henry Siding on the Rock Island Peoria branch that I model. Because it is late-era Rock Island, I wanted the siding to look, um, crappy. It worked! So, you can even make the best of a person's shortcomings.

Some modelers are loath to let anyone other than themselves work on their layout. And I get that. But with a layout as large as mine — and never enough time to work on it even though it's actually part of my career path — I need all the help I can get, especially with the electronic voodoo part. Besides, after hav-

Bill's world

Mike Ritschdorff (right) is explaining to our own Mike Schafer his job assignment on Greg Bedlek's Great Northern Pacific. Mike R. sends email announcements for GNP sessions and assigns crews for the various jobs during the operating sessions. This allows Greg to not only attend to any problems that may arise, but also (gasp!) actually run trains during his operating sessions.

—Bill Navigator photo



Bill's world

Mike Ritschdorff, crew caller for Greg Bedlek's sprawling Great Northern Pacific layout in suburban Chicago, warns Schafer that he's about to be assigned to one of the most critical yards on the layout.
—Mike Schafer photo

ing the guys at the FCMR Club mentor me on some of the basics so many years ago, I feel that it's my duty to do likewise with my newer and usually younger assistants.

When it comes to operating sessions, it's a whole different set of circumstances. My Friday night work-session regulars number a half-dozen guys (and one gal) or so, but I&StL op sessions draw from a pool of some 50 people — not including visitors, which with advance notice are always welcome — with my limit per session ostensibly a total of 15 operators.

I usually announce my sessions via the internet, either directly through my I&StL email list or sometimes through the RockRail website, or both. RockRail (RockRail.org) is a loosely organized group of operators from northern Illinois and southern Wisconsin. Since many of us RockRailers operate on these

different layouts, we try to coordinate our operating sessions through RockRail so as to not set conflicting dates for sessions.

Generally, I follow a “seniority” system much like a real railroad would. My core of people who attend my Friday night work sessions — or otherwise assist in the building of my I&StL, such as “leasing” equipment to me — are usually first advised that I have set a date for a session. Once they give me a yea or nay, then I'll know about how many additional operators can fit in.

As for crew assignments during op sessions, there are a number of different ways to go. On the I&StL, I employ a crew-caller — either myself or long-time (since 1965) friend Craig Willett, a retired railroader who does, indeed, have some real-life crew-calling experience. I do show favoritism to my Friday-nighters who want specific jobs (usually a yard). After all, these

fellows have given up hours of their time in helping build Illinois & St. Louis—The Sequel and this is one way to provide remuneration. Besides, none of them would accept the I&StL stock certificates I offered them. There's a reason some of them refer to the I&StL as the “Insolvent & Still Losing.”

If other operators advise me of their preference, I may or may not accommodate, depending on various situations at hand. At the same time, though, I won't force someone to take something as involved as a yard job if they don't want it. But speaking of yards, that's one station where you might want to have a regular who knows the territory and the routine. If a principal yard gets backed up on the railroad, the domino effect can ripple across the system.

I know of a fellow who is an avid yardman. Once, when he didn't get any yard job at all be-

cause he was late to an I&STL session, he stormed away mad. He had pulled this stunt before on another area layout and has since not been invited back. Even in real-life railroading, you don't always get the job you want, especially if you are low man on the totem pole. But you take it and move on.

And again, there are those personality-related situations that are inevitability going to surface when you have a group of 15 people in a relatively confined area. I graduated college with a teaching degree that theoreti-

cally qualifies me to teach kindergarten through 12th grade — and, boy, that kindergarten level has especially come in handy at times!

Fortunately, only once was it bad enough to wonder if a fistfight was going to start — guys, these are toy trains! — and a couple of my other operators were actually offended. But, my pool of regular operators includes three police officers — two of them Chicago cops, no less — so I don't worry too much about this happening again.

And then there's Bill. Poor

Bill. Like the proverbial kid whose friends avoided him so much that he had to tie a steak around his neck to even get his dog to play with him, Bill has to have his amazingly tolerant wife Janis bake her famous cookies to lure operators to his op sessions. So, his take on all this stuff about managing the troops is probably a little different from mine. Take it away, Bill. And pass those cookies, please. Oh, you said you made them yourself especially for me? Well, um, I think I'll take a pass. (Why are those sugar sprinkles moving?)

Mike's world

Crew callers and the dispatcher on Mike's Illinois & St. Louis use this train list for the session at hand to call crews. Crews are assigned to specific jobs based on a number of factors, such as seniority or an operator's request for a specific type of train. Note that Mike has made notations regarding jobs that would be ideal for newcomers.

—Mike Schafer collection

CREW CALLER							
* IDEAL RUNS FOR NEWBIES							
ILLINOIS & ST. LOUIS/CIT&T TRAIN LIST, 1st TRICK 7A-3P, 1965							
				DISPATCHER	LEVERTON	DATE 11-26-65	
Crew	Job/Train No.	Symbol/Name	Type	Direction	Endpoints	List time & location	
X WJA II	CRI&P #12	Peoria Rocket	Passenger	Eastbound	PEO-CHI	7:00A	Peoria Central Station
X Steve Carlson	I&STL-CB&Q #481	Black Hawk-St. Louis	Passenger	Southbound	MSP-RIS-STL	7:00A	AT IOWA JCT./PEORIA
X Jon	GM&O South Local	"Long Arm Local"	Local switch	Southbound	CHI-DWT	7:01A	AT UD TOWER/JOLIET
X Rick S	Field's Special	Extra 520 North	Passenger	Northbound	SPI-CHI	7:15A	Springfield/ST. Louis Staging
X Duncan	I&STL-EL #99	SL-99 Flying Saucer	TOFC	Southbound	MAR-HMI-STL	7:15A	AT STATE LINE
X Bob G R G	I&STL #1	Voyageur	Passenger	Southbound	MSP-IND/STL	7:30A	Mezzanine Staging RIGHT
X Harold	TP&W #122	—	West Local	Eastbound	FTM-PEO	7:30A	Central Illinois Staging
X WJA II	AT&SF freight	—	Time freight	Eastbound	KCY-CHI	7:30A	AT COAL CITY
X Chris	* SL. Louis Extra	Extra 608 North SOUTH	Freight	Southbound	CHI-STL	7:45A	State Line Yard
X WJA II	8AM East Peoria Job	—	Switch Job	Turn	PEO-EPO	8:00A	Peoria/Magnuson Yard
X Rick S	* I&STL #264	IR-4	General freight	Northbound	IND-RFD	8:01A	Bloom. (Indy) Staging RIGHT
X MAC	I&STL #243	RC-3	Road freight	Southbound	RCK-CHI	8:30A	Mezzanine Staging LEFT
X Bob	* I&STL #254	SC-4	Time freight	Northbound	STL-CHI	9:01A	Springfield staging
X Steve K	CIT&T Pekin North Local	—	Local	Northbound	TAZ-MORT-PEK	9:01A	Tazewell Yard/Mackinaw Jct.
X R G	GM&O Plaines Coal Train	—	Unit coal	Northbound	PCY-JOL	9:30A	Peoria Junction/Dwight
X Harold	AT&SF #19	Chief/Kansas Cityan	Passenger	Westbound	CHI-KCY	9:45A	Main Level Staging, LEFT
X Duncan	I&STL #25	Chicagoan	Passenger	Southbound	CHI-STL	9:40A	Main Level Staging, LEFT
X MAC	AT&SF Texas Freight	—	Freight	Westbound	CHI-KCY-FTW	10:01A	Mezzanine Staging, LEFT
X WJA II	ITC #200	—	Freight	Northbound	McK-PEO	10:01A	Mindale/Lincoln
X R G	B&O #98	—	Time freight	Eastbound	CHI-PIT	10:15A	Calumet Park
X Rick S	NKP #62	—	Freight	Eastbound	PEO-BVU	10:30A	Central Illinois Staging
X MAC	* I&STL #253	CS-3	Road freight	Southbound	CHI-STL	10:30A	State Line Yard, Calumet City
X Harold	GM&O #97	PL-5	Road freight	Southbound	CHI-KCY	10:45A	Mezzanine Staging, LEFT
X Jon	B&O #95	—	General freight	Southbound	PIT-CHI	10:45A	Main Level Stage, LEFT
X WJA II	* I&STL #38	The Tractor City	Passenger	Northbound	STL-PEO	11:00A	Bloomington/St. Louis staging
X Duncan	GM&O #1	The Limited	Passenger	Southbound	CHI-STL	11:25A	Mezzanine Staging, LEFT
X R G	CRI&P #11	Peoria Rocket	Passenger	Westbound	CHI-PEO	11:30A	Mezzanine Staging, RIGHT
X Harold	* P&E Extra	—	Road freight	Eastbound	PEO-HIL	11:35A	Peoria/Magnuson Yard
X Jon	* I&STL #263	MI-3	Road freight	Southbound	MSP-IND	1:40A	Mezzanine Staging, RIGHT
X WJA II	* I&STL-EL #289	NE-89 Nor'easter	Thru merchandise	Southbound	PTM-STL	12:01P	Main Level staging, LEFT
X Bob	AT&SF First #18/2nd #18	Super Chief/El Capitan	Passenger	Eastbound	LAX-CHI	12:15P	Main Level Staging, RIGHT
X WJA II	IT #203	—	Freight	Southbound	PEO-McK	12:30P	Peoria/Magnuson Yard
X Duncan	* I&STL #6	Mid-American	Passenger	Northbound	IND-MSP	1:01P	Bloomington Staging
X Rick S	AT&SF Kansas City freight	—	Freight	Westbound	CHI-KCY	1:10P	Mezzanine Staging, LEFT
X R G	GM&O #2	Abraham Lincoln	Passenger	Northbound	STL-CHI	1:10P	Peoria Junction (Dwight)
X WJA II	EJ&E PM Joliet Transfer	—	Transfer	S.B./N.B.	JOLIET	1:15P	Mezzanine Staging, LEFT
X Harold	GM&O #4	—	General freight	Northbound	KCY-CHI	1:30P	Main Level Staging, RIGHT
X Bob	I&STL #244	CR-4	Time freight	Northbound	CHI-RFD	2:01P	State Line Yard/Calumet City
X MAC	AT&SF Joliet Transfer	—	Transfer	W.B./E.B.	Corwith-JOL	2:01P	Mezzanine staging, LEFT
X WJA II	CB&Q #67	PG-67	Road freight	Westbound	TAZ-GBG	2:15P	Tazewell Yard
X WJA II	IC #273	PM-3	Gen. freight	Southbound	PEO-MAT	2:30P	Peoria Magnuson Yard



Bill sez...

Mike, sorry I'm a little slow in responding, but I dozed off there for a moment reading your random thoughts. Seems the older you get, the more you seem to drift along. But that's okay — it makes for interesting reading. I'd like to address your last point first. Our regular reader(s) and I may have noticed your reference to my wife Janis's excellent cookies and how they lure operators. Whatever works! I wonder if that relates to your training that includes the level of kindergarten teacher — give them cookies and have them take a nap — and all will be well for the teacher. I was a college instructor for some time. That doesn't work with college students as well, probably since they already know everything.

But to address your more, um, relevant issues that you brought up... When I built my previous layout, I pretty much did it all on my own. In one respect, I just

wanted to do it all and enjoy the experience. Also, I had a busy career while raising a family, so often my basement time was late at night — not very conducive to having fellow modelers available for assistance, although several excellent modelers did contribute to the layout.

I've been fortunate that I've met several excellent modelers since Janis and I have relocated to central Illinois. Those modelers have been more than gracious with their time reviving the Chicago, Peoria & Southern. Mike, I can appreciate your assigning duties to your helpers in terms of abilities. My helpers have experience building excellent layouts from the benchwork to sophisticated electronics, so I don't care what they do. One in particular, Rick Schroeder, is a retired civil engineer who engineered real railroad track. Not only did he build his model railroad to operate flawlessly, but he also made sure the real ones did too. When several people show up for a work

session, some will just go off to another side of the basement and do their own thing. Occasionally, I may wander by, usually looking for a tool, and get chased away. I'm told that it's not my railroad anymore, I'm just providing the space.

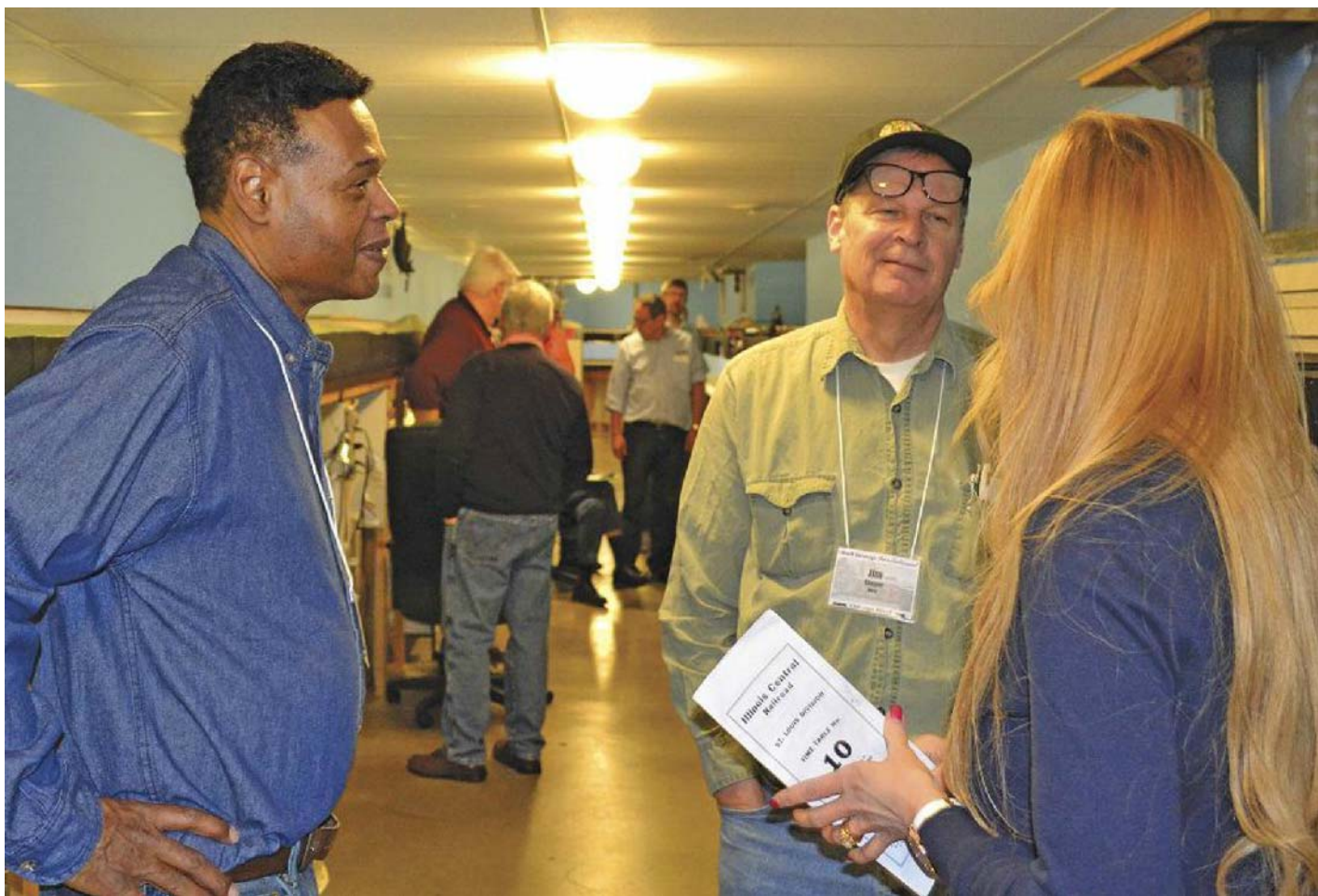
I've been attending operating sessions for more than 40 years. I've seen as many ways to invite operators and assign jobs as there are operating sessions I've attended. Some owners don't even get all that involved in the process. Some have a "gatekeeper" who sends out the invitations, usually by email these days. Some have a website where operators mark up. Personally, I like to send out email invitations to the regular crew for the regular operating sessions. Sometimes out-of-town group sessions are held, and the organizer will coordinate who will attend. A few regulars will attend to assist the visitors.

Personally, my general call list includes those who have helped

Bill's world

Dean Mikalowski, center, is passing out numbered cards to operators prior to the start of his operating session. Jobs are then chosen in order, by number. Any job can be chosen by the operators, except for dispatchers. Dean's large layout requires two dispatchers, usually himself and one other. Dean also doubles up as crew caller for the next jobs. —Bill Navigato photo





with the CP&S, other layout owners who invite me to their layouts, regulars, and you, Mike. It's not that you're not included in one of the first three groups, nor that your strange, anti-electronic aura tests the durability of my NCE and other electronics that run the railroad. (Side note: Mike, we hope you don't ever go near NIST laboratory in Boulder, Colorado, where the U.S. atomic clock is located. We can just imagine our official time being off for generations to come.) It's also a way to get more material for this column.

Job assignments are open to anyone. I'll go down the list and operators will call out their preferences. Some will usually take a regular position. If someone would like to try one of those, the regular will usually offer to take another position. If there is a particularly significant job, a coach will stand by to assist if necessary. Usually, everything works

out. The worst that has happened is, nine of Peoria yard's 12 tracks didn't have any cars corresponding to their respective car cards — easily fixed between sessions.

Crew size on the CP&S can vary from about 16 or so to 20-something. Having more operators allows the locals to have a two-man crew. This makes it easier for the job to get done, keep track of other trains, etc. The operating scheme is not designed for everyone to have a throttle in their hand and running a train at all times, although the operating scheme does have a couple of Extras that are only run when the crew size allows.

Mike and I know of some operators who have their crew members draw a number out of a hat. If you draw the number 1, you go first in choosing whatever job you want. In some cases, specific critical jobs, such as dispatcher, may be preassigned.

The CP&S operates under the

authority of Time Table & Train Orders. I'll often invite those who show a particularly keen interest in TT&TO but have avoided it like the plague because they are inexperienced or a little afraid to try it. They (and Mike and I as well) have heard horror stories of, or actually witnessed, a volunteer be harshly put down because they made a simple mistake. In one case, an operator drove three hours to attend an eagerly anticipated op session during which, only a short time into the session, the fellow, being unfamiliar with the layout, ran a red signal. The layout owner took him "out of service" for the rest of the session! The fellow was devastated and humiliated.

Mike and I both agree to welcome newbies to our layouts. They can go along the railroad with a pilot and then go out on their own. That's the only way to learn. The only requirements are an interest in doing it and having

Bill's world

Debra Wold (right) gets direction at Bob Perrin's (left) Illinois Central operating session. Jim Singer generally directs Bob's session — calling crews and explaining the various jobs. Bob is the gracious host and stands by to address any mechanical or electronic issues that may arise.

—Bill Navigator photo

Bill's world

Jeff Varney, a retired Milwaukee Road/Canadian Pacific tower operator, appears vexed by an impossible three-way meet that has Bill Navigato's Chicago, Peoria & Southern tied in knots at Farmersville during the layout's final operating session in 2016. Nobody got in trouble, and everyone got a good laugh out of it. Model railroading is supposed to be fun, you know!

—Mike Schafer photo

fun. Even with my experienced operators — with *years* of experience — stuff happens. One of the memorable moments at the last CP&S operating session in 2015 was a four-way meet that, I assure you, was *not* supposed to happen. As is the tradition of the CP&S, when the dispatcher discovered what was about to happen, the call went out..."Get your cameras!" No one was scolded, mocked, hung, or quartered. Most had a good laugh and stood by to see how the situation would play out.

A most important aspect of my operating sessions is that I want all to enjoy it. As John Swanson mentioned to me once: "You know, Bill, the main reason I enjoy operating your railroad is that when someone screws up, you don't yell; you just laugh and move on..." This was one of the nicest compliments I've received about my operating sessions.

I can appreciate that owners want their railroad to be how they want it to be. We all do. But I nev-

er understood the ones who have their "library rules" and other totalitarian ways of doing things, expecting every operator to do every action exactly how they perceive the real railroads do things. Often, these so-called experts never worked for a railroad and don't really know what goes on. Needless to say, on real railroads things don't always go as planned either. Case in point, I've heard layout owners tell an operator to "hurry up, you're taking too long, you don't know how to do it right..." Nothing like showing up, being handed a throttle, taking off for the first time, and expecting to be perfect! Geez. For example, a model railroad operator shared a recent experience of his on a friend's railroad. The operator was working on a local on the model railroad for the first time. Well, he was still working the same local two sessions later. The owner questioned his time out on the road; that he was taking too long. The operator told the owner that in

this era, crews had a 16-hour law. That meant crews could work up to 16 hours before a rest period was required. So he still had time to finish his job and didn't feel he had rush what he was doing. Not to mention this was his first time doing that job on his railroad and generally those working a line for the first time would at least get a pilot or others to show the route or explain what had to be done.

I guess my sessions are a bit different than most. As you have mentioned, Mike, on several occasions, CP&S operators come for the cookies. The operating session is just something to do to pass the time while eating them.

A Second Look

Alan Olson sent us an email about our column in the March 2017 issue:

I thought the confusion and controversy about turnouts versus switches had been put to rest years ago, but here is Mike confusing the words in the March



issue. Mike says “... *track switches* (*turnouts in model railroad parlance*) *can be thrown by switch motors or by hand*” [caption page 74] and Mike says “the easiest way to throw turnout points...” and “when the turnout is in the normal position... and... when the turnout is reversed” [page 78]. Wrong and wrong again. Now, I’ve been a model railroader for almost 60 years, and I used to work in the Milwaukee Road engineering department years ago. I can safely say no brakie or switchman has ever been able to “*throw*” a turnout — ever! And I’ve never seen a turnout change its position either.

The terms *turnout* and *switch* are both correct, when their meaning is understood and when the terms are used correctly. A *turnout* is the whole assembly of parts needed to allow railroad track to be split from one route into two. The engineering/Maintenance-of-Way department builds and installs *turnouts* which include the switch points, tie rods, switch rods, a frog, stock and closure rails, and guard rails — the whole works. The *switch* is only the movable part of a *turnout* — the *points, rods, etc.* Operating

department employees never think about *turnouts*: they are only concerned with the position of the *switch*. The brakeman, switchman or switch-tender, and the dispatcher “throw,” “line” or “align” the *switch* (points) to direct equipment to the desired track. I might add here that frogs have numbers (No. 6, No. 8, etc.) based on the angle of diversion, and so do the *turnouts* that the frog is a part of, but *switches* (the points) do not have numbers. You can have a No. 8 *turnout* but not a No. 8 *switch*.

So, if you are building a layout, most model railroaders purchase and install ready-built *turnouts*. Then, when you operate that layout, your crew will line or throw the *switches* to run trains. The only exception might be if Mike decides to throw a turnout at Bill during one of their work sessions. ‘Nuff said.

Mike sez: Ah, leave it to an engineering type to have to explain to this dizzy artist/writer about the difference between turnouts and switches! Our readers and I certainly appreciate this. I do have to say that, after I received your comment, I asked several of my friends who are real railroad employees about turnouts versus switches, and everyone said that they never use the term “turnout.” “That sounds like an engineering department thing!” one fellow half-heartedly joked. Also, Bill said that when he went to work for the railroad (the Soo Line) many moons ago, he initially used the term “turnout” when out with a crew switching Schiller Park Yard near Chicago and was quickly asked “What’s a turnout?”

Bill sez: Alan, we appreciate your response. My only comment refers to your point of Mike “throwing a turnout” at me. Mike isn’t one of the more athletic people around. His attempt would be not so much of a “throw,” but more a feeble toss. So in that sense, not even Mike can “throw a turnout.”

Another response about turnout, er, switch control came from Richard B. Walter:

I enjoyed the article about turnout control. However, the photos of the turnouts, which appears to be Walters’, show the points connected with metal strips. I’m sure Mike and Bill use DCC. From everything I’ve read, the

points need to be separated from each other. So what gives, fellas?

Mike sez: My Illinois & St. Louis—The Sequel has indeed been DCC since work began on it in 1998, almost 20 years ago. Bill’s Chicago, Peoria & Southern has also been DCC as will his latest CP&S now being rebuilt near Champaign, Illinois. Back when I started I&StL—The Sequel, DCC-friendly turnouts were difficult to get. They were just starting to become popular in the late 1990s. So I took what I could get, which was then the standard old DC turnouts (plus I was using turnouts pulled up from the old I&StL). You can’t see it in the photos, but additional gaps had to be made, etc. to accommodate the DCC system. But even that was just a, um, stop-gap measure. I will systematically be replacing earlier turnouts/switches/things that divide track-routing/etc. with DCC-friendly stock.

Bill sez: Richard, the answer is a definite yes and no. Yes, you can use the older Walthers Code 83 and Shinohara Code 70 turnouts with the solid throw bar without having an issue with using DCC. But problems are more likely. On these turnouts, power for the points comes from direct contact with the stock rails. This is fine as long as they are completely clean and maintain constant contact. However, an issue can arise when wheel sets on locomotives and lighted passenger cars are slightly out of gauge, causing a short. This happens more frequently with six-wheeled locomotives and lighted passenger cars. Usually, the center axle has more side-to-side play to allow for curves and can make a momentary contact against the opposite points, causing a short. Even the slightest shorts in DCC can have a more noticeable effect on locomotive decoders. My alternative in avoiding these issues is to replace the solid bar with Clover House PC throwbar strips, making sure that I file through the copper surface. Also, I put a very short jumper wire from the stock rail to the point rails, so the points are always powered. Direct contact isn’t necessary. This is a pretty easy and fast fix to annoying shorts, without having to replace expensive turnouts. **RMC**





Mass Production

CRAFTSMAN/Bob Walker, photos by the author

Parts

Sort all the parts of your project into as many "kits" as necessary, making sure that all of everything is at hand.



From the time I was 9 years old, I "knew" where my life was going. I was determined to be a professional baseball player. With some early success at the sport, I actually clung to that premise through college and into

"the pros" (Single-A ball). The hardest lessons were learned in quick time that I could not hit a true professional curve ball. The dream evaporated in the Summer of '67 with a not-so-kind greeting from Uncle Sam.

Fast-forward two years to the summer of '69, where my interest in model trains had continued from my youth. I guess I was really addicted to this hobby by then and was well starved for it by non-participation during my time overseas. My goal at that point was to become a model railroad manufacturer. I never thought I would get rich, I just wanted to make my hobby my business, and *not* have a boss all

my life. I wanted to make kits.

Being heavy into narrow gauge, I wrote Cliff Grandt of Grandt Line and requested to purchase (at a discount, of course) the parts to make a D&RGW 3000-series wood box-car. Mr. Grandt kindly took pity upon this young upstart and took me under his wing. A book could be written about how much this man did for the hobby, and I am convinced that I am not alone in the number of folks he helped get started in this business.

I ended up cutting up a whole lot of Evergreen car siding for sides, ends, roof, and floor, and making up two dozen "kits" from these pieces and several poly-



bags of Grandt Line parts, strip styrene, and screws. I drew up a crude (*wow*, looking back on them, *really* crude) set of directions, boxed them up, and slapped on some printed Avery labels. I sold all of them to a hobby shop owner (Toy and Hobby House in Des Plaines, Illinois), who surprisingly sold out of them fairly quickly. While gratifying, I began to do a little basic math. When he asked for more kits, I did a quick calculation of my profit and ensuing hourly rate. It came to pass that I could make twice as much flipping burgers at McDonald's. When I declined, he said, "Welcome to reality." That is why there was a 10-year hiatus in my "manufacturing" endeavors.

Ever the optimist, Walker Model Service was started in 1980 (again, with a great amount

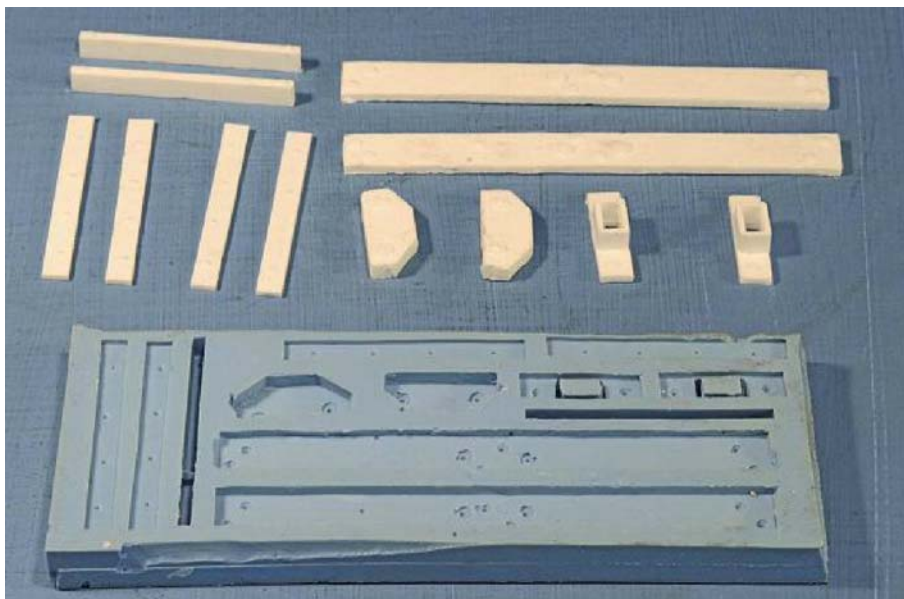
	15	1	2	3	4	5	6	7	8
BREAK BEAM	2 6	✓	✓	✓	✓	✓	✓	✓	✓
BREAK BEAM RODS	4 4	✓	✓	✓	✓	✓	✓	✓	✓
BREAK SHOES	4 8	✓	✓	✓	✓	✓	✓	✓	✓
PEDESTALS	4 8	✓	✓	✓	✓	✓	✓	✓	✓
WHEELSETS	2 2	✓	✓	✓	✓	✓	✓	✓	✓
DECK PLANKS	20 20	✓	✓	✓	✓	✓	✓	✓	✓
PIN PLATES	4 4	✓	✓	✓	✓	✓	✓	✓	✓
SAN NBLW	16 16	✓	✓	✓	✓	✓	✓	✓	✓
LG NBLW	5 5	✓	✓	✓	✓	✓	✓	✓	✓
BREAK WHEEL	1 1	✓	✓	✓	✓	✓	✓	✓	✓
BREAK STAFF	1 1	✓	✓	✓	✓	✓	✓	✓	✓
RATCHET/PAW	1 1	✓	✓	✓	✓	✓	✓	✓	✓
BRAKE BEAM	2 2	✓	✓	✓	✓	✓	✓	✓	✓
BUNK BRAKE	2 2	✓	✓	✓	✓	✓	✓	✓	✓
BUNK	1 1	✓	✓	✓	✓	✓	✓	✓	✓
BUNK CAPS	2 2	✓	✓	✓	✓	✓	✓	✓	✓
L/P COUPLER	2 2	✓	✓	✓	✓	✓	✓	✓	✓
LINK	2 2	✓	✓	✓	✓	✓	✓	✓	✓
PIN	2 2	✓	✓	✓	✓	✓	✓	✓	✓
PIN RING	2 2	✓	✓	✓	✓	✓	✓	✓	✓
SIDE PLATE	2 18	✓	✓	✓	✓	✓	✓	✓	✓
END BEAM LONG	4 4	✓	✓	✓	✓	✓	✓	✓	✓
END BEAM SHORT	4 4	✓	✓	✓	✓	✓	✓	✓	✓
WEIGHT	1 1	✓	✓	✓	✓	✓	✓	✓	✓
UNDER BEAM PLATE	1 1	✓	✓	✓	✓	✓	✓	✓	✓
DECK STRAPS	4 20	✓	✓	✓	✓	✓	✓	✓	✓
STIRRUP	1 1	✓	✓	✓	✓	✓	✓	✓	✓
KD COUPLER	1 1	✓	✓	✓	✓	✓	✓	✓	✓
COUPLER POCKET	2 6	✓	✓	✓	✓	✓	✓	✓	✓
HEX BOLTS	12 12	✓	✓	✓	✓	✓	✓	✓	✓
LOG LOAD	3 3	✓	✓	✓	✓	✓	✓	✓	✓
		160							

Log Train

Above: The author created a five-car log train for his Fn3 (indoor) logging line using mass-production techniques.

List

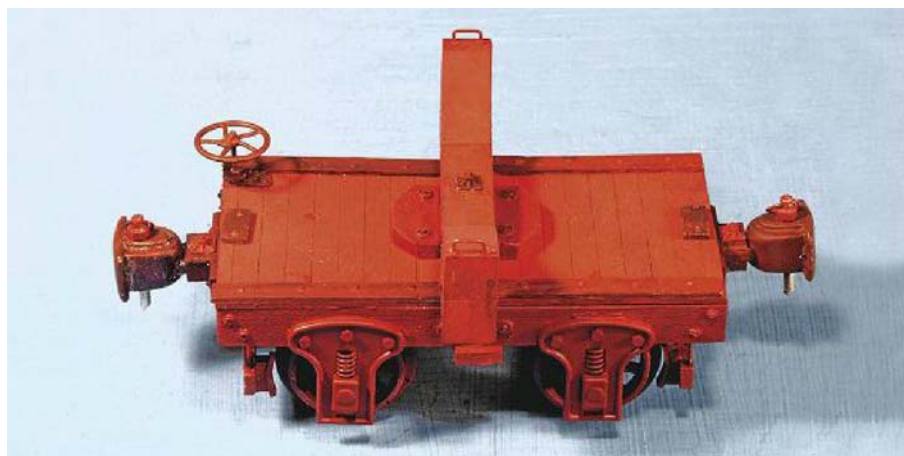
Left: Like Santa, make a list and check it twice, note everything you will need and how many, and then check them off as they are added to the boxes.



Above: An RTV mold was made from various handmade patterns and then the proper amount of castings found their way into each "kit."



Above: This is one disconnect worth of parts. The author made ten sets to make his five-car train.



Above: Finished disconnect. This is one of the center ones with link & pin couplers on both ends. Kadees were applied to each end of the "train."

of help from Grandt Line and a bit of that math we spoke of), Accurail was conceived in December 1986, and the rest is history. I guess you could say that making kits still puts food on my table.

Most scratchbuilding projects are one-off affairs not requiring much in the way of "mass" production. There are those projects, however, that require multiples of not only components, but entire models. Back in the early 1970s when I learned about RTV molds and resin casting (mostly from the many articles by Dr. Wayne Wesolowski, Greenberg & Nash, and Jack Work), there was now a pathway to achieving mass production in modelmaking. There is a learning curve to patternmaking, moldmaking, and resin casting, all of which have been covered here.

I built six company houses for my On3 logging railroad, using resin walls and roof components from handmade masters and castings. Using those same kit-making techniques, I made up a string of log cars in much the same manner. When I was into Sn3 recently, I went back to my original premise with Mr. Grandt and the good folks at Evergreen and added in a kapoo of P-B-L parts to make up a half-dozen D&RGW boxcars. It worked out so well that I did it again with a set of flatcars in the same scale. I have found that the methods of mass production will allow you to build six of something in about 75 percent of the time it would take to complete six individual projects. The repetitive nature of assembly, as well as the fixturing and casting aspects, reduces the time spent on each. Remember, casting from patterns is only worthwhile when you need multiples of a component. Consider the pattern, molding, and casting time, and compare it to the time it would take to make up each individual component. With just two or three of something, it is usually not worth the extra time involved. Need a dozen or more, and the casting aspect is far more attractive.

The basic idea is to gather up all the commercial components you will need for the job, cut up all the raw materials into appropriate sizes, and sort them out into "kit" boxes. Make a master list of each part, and the quantity

(total) that you will need for the entire project. As you add parts to your line of kit boxes, check off that part as you go; working from that master list will assure that you don't run out of something halfway through the endeavor or forget about one small widget you need a bunch of. If there are subassemblies that you can make up as patterns for molding and casting, cast a few more than you need, and add those specialty parts to your kit boxes, then choose only the best ones for the project.

In making that first one, which I call a pilot model, determine the techniques and step-order necessary to complete the model. It is during the construction of this initial model that will tell you if you need to construct a few assembly jigs (fixtures) to aid in the assembly. Once you have built that all-important first one and have come up with the proper assembly order and methods, and made the necessary jigs, it's time to go for it.

For this column, I chose to make ten logging disconnects that will make up into a five-car log train for my new Fn3 lumber line. A disconnect is basically a



Above: A finished pair shows the rooster and logs in place.

single truck with a log bunk and brake system that connects to a second one with a pole called a "rooster." Roosters could vary in length to match the length of the logs they were to carry. Some got surprisingly long. I chose 24 feet for my logs, but I've seen pictures of poles as long as 90 feet. Yep, some outfits were long on guts and short on safety.

Off to eBay to start this project. Wiseman Model Service provided the link & pin couplers, and LGB was

the source of pedestals and spoked wheels. Grandt provided stirrup steps and the NBWs, which were used on the casting patterns, along with more for the individual components. The brake wheel, ratchet, and pawl were from Ozark Miniatures. Make sure you have everything you need before you start, or the project may stall forever. Ask me how I know *that*.

I made an RTV mold to make the end and side sills, log bunk, coupler



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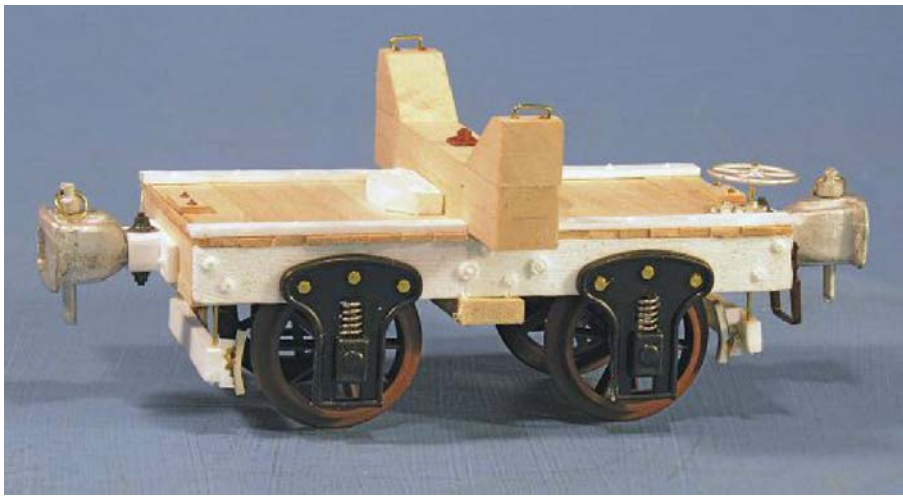
Evolution (shown) | \$450 MSRP

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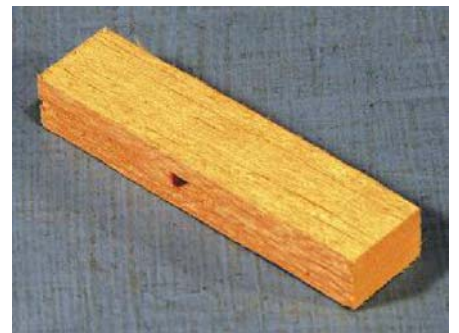
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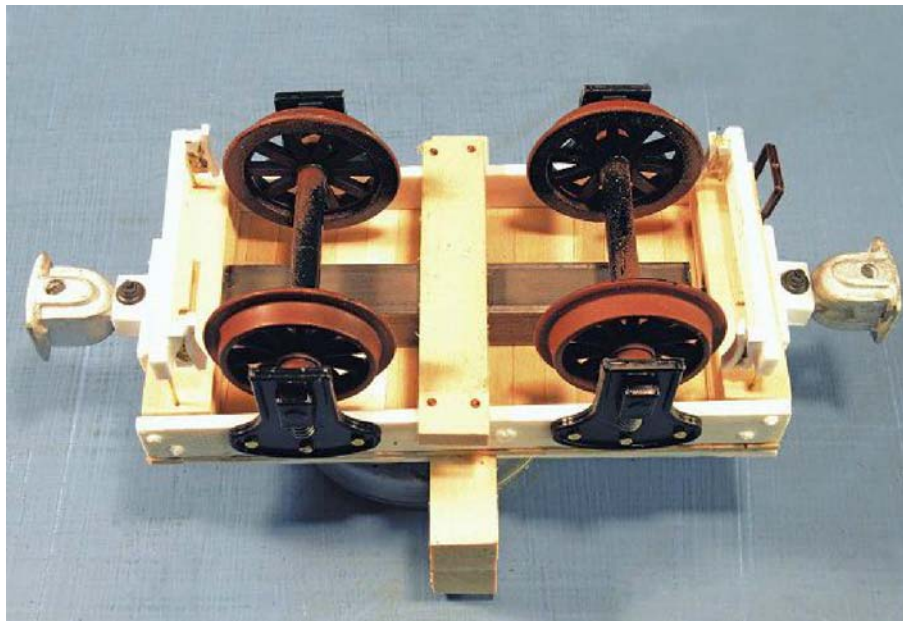
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Above: The unpainted version clearly shows the metal, wood, and resin components.



Above: The square hole for the coupler shank was achieved by sandwiching four pieces of wood together. Measure carefully here.



Above: The underside shows the $\frac{1}{2} \times \frac{1}{2}$ -inch steel bar used to increase the weight and trackability of the unit.



Above: A jig was used to make sure all the pedestals were in the exact same place and the wheels were at a true 90 degrees to the sideframe and exactly across from one another.

pockets, bunk braces, and strap braces. The end sills had a square hole to accommodate the coupler shank, so I made it up with four pieces of stripwood rather than trying to make a square hole with a round drill and a file. Yes, I tried it that way first, and it did not work out so well. I will save that description for a column on humor. All these moldings cut the tedious assembly time from a day each to a little over an hour each. I cut all 200 deck planks from a single bundle of $\frac{1}{16} \times \frac{1}{2}$ -inch stripwood hacked out of a decent 1x4 (pine).

I lined up 10 kit boxes and then began sorting the parts, marking off the master list as I went. Once I had all 10 filled with all the components and parts, I began the assembly procedure. I timed the first one at four hours from start to finish. I held off painting them until I had all ten crafted. This way, I only had to fire up and subsequently clean the airbrush once. I substituted Kadee couplers at the ends of the "train" to accommodate the locomotive and caboose, which were not link & pin.

The logs were made from $1\frac{1}{2}$ -inch hardwood dowels (Menards) and then roughed up with a coarse saw blade. I sanded and wire-brushed off the horrible burrs I gouged in with that saw blade. I then stained the logs with a fairly dark mixture of India ink and alcohol.

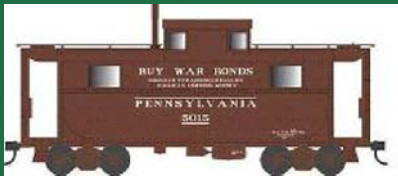
You can apply most of the techniques presented here to almost any modeling project requiring things to be created in multiples. As to next month... well... er...umm... I'll have to give that some more headwork. I just don't know yet.

RMC

Bowser

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HO 100 Ton Hopper Cars

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Westerfield Models: Union Pacific S-40-1 Stock Car

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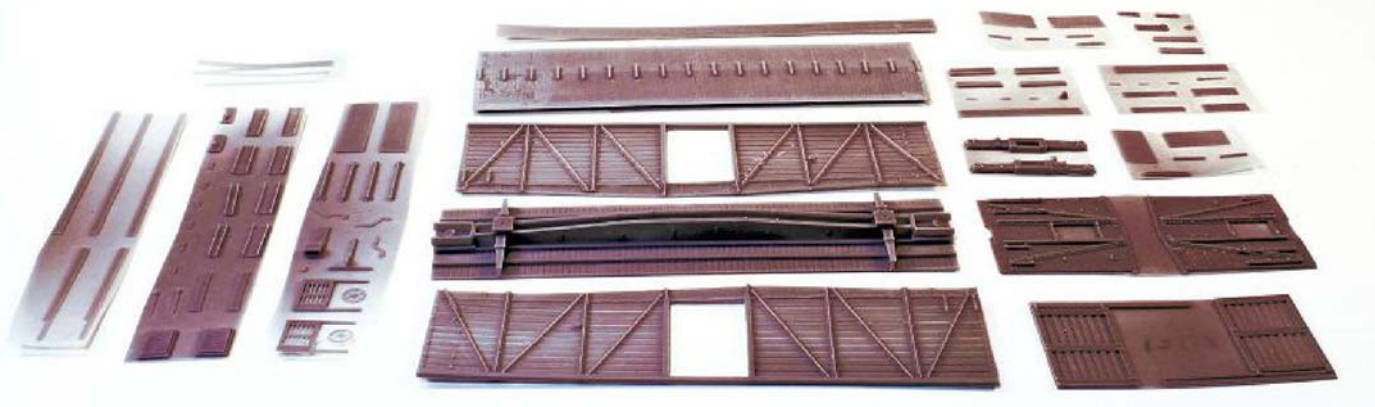
HO — While no longer common on today's railroads, the transport of livestock was among the earliest operations requiring specialized rolling stock designed for the safe carriage of animals. From the mid-1860s to the early-1960s, whole trains of stock cars traveling at passenger train speeds carried vast herds of cattle from collection points in the West and Midwest to feed lots and packing plants located in America's cities.

By the turn of the 20th Century, wood-frame and truss-rod cars began to give way to modern rolling stock that featured steel underframes, knuckle couplers, and air brakes. Examples of this type of construction include S-40 class

cars built for Union Pacific (UP) and Southern Pacific (SP). Beginning in 1905 and ending in 1918, more than 5,400 of this type of stock car saw construction by six different rolling stock manufacturers in three sub-classes. Early versions were upgraded beginning in 1911 with the adoption of the Safety Appliance Act. By the mid-1920s, Union Pacific began a rebuilding program to repair and cosmetically update many of its stock cars. At this time, the archbar trucks that the cars initially had at the time of their delivery were replaced with Andrews trucks to meet the railroad interchange requirements. The rebuilt S-40 class stock cars

went back into service and continued operating into the 1940s before retirement began. The S-40 cars began to leave the roster in the 1940s with the last example being retired in 1951.

Westerfield Models is a seminal manufacturer of precision resin kits. The company has been at the cutting edge of offering accurate historical models of unique and unusual HO-scale rolling stock kits. Westerfield offers kits for at least eight different versions of the S-40-1 class of stock cars. The base kits are sold without trucks and couplers and sell for \$40. Westerfield does provide options when ordering to have Tahoe Model Works' TMW-103 or TMW-203 American



Car & Foundry (ACF) archbar trucks included for a \$5 upcharge. Alternatively, the builder can use Kadee's archbar trucks (#501) or Kadee Andrews trucks (#509). The review model is Westerfield's UP/Los Angeles & Salt Lake S-40-1 single deck stock car (#12551), reproducing Pressed Steel single deck cars as rebuilt in the 1920s. This version is equipped with Tahoe TMW-103 ACF archbar trucks.

Westerfield kits, by virtue of using molded urethane resin for most of their components, require a bit more experience and patience to complete successfully. Much of the assembly time consists of removing the flash and carrier from these parts. For this work, a very sharp modeling knife or scalpel, a set of needle files, and several grits of sandpaper are required. Despite the flash, which is usual on resin kits, each of the pieces is cleanly molded, fully detailed, and free from air bubbles. You'll need to clean each of the urethane parts to remove any residual mold release. Greased Lightning household degreaser was applied to each of the parts, and a toothbrush was used to get into the crevices.

The parts were then rinsed in clear water and allowed to air dry. This cleaning procedure is required so that both glues and paint will stick to the castings. In addition, when building resin models, ACC and epoxy glues are almost mandatory for construction. Both thin Pacer Zap and thick Loctite ACC gel were used to construct this model, with the gel used to tack parts together and the thin ACC to flow into the seams of the major parts. This strategy yielded a very resilient model that was assembled quickly without any telltale glue smears or fingerprints.

Westerfield's S-40-1 HO kit represents a flat-stock kit in that the body is made up of the individual sides rather than being cast as a one-piece shell. In a departure from the construction of most craftsman-type models, the kit instructions recommend beginning by drilling and installing the wire grab irons prior to assembling the four sides of the carbody to the underframe — wise counsel, since the delicate ends and sides were much easier to handle separately than they would have been on an assembled body. The underframe was also assem-

bled as a subassembly with the wire airline, injection-molded brake casting, and brake rigging. Silicone sealer was used to attach the metal weight to the floor. The bolster and coupler pocket was drilled and tapped to accept a 2-56 machine screw — not included in the kit (provided by the builder).

A note regarding the kit instructions: they are complete for every one of the different versions in each of the subclasses. This can lead to confusion if one is not careful. One workaround is to highlight those instructions that are germane to the version being assembled. The only other criticism of the directions is that the lettering photos are somewhat muddy, making it difficult to determine the type and location for lettering placement. Either sharper images or a drawing would greatly help.

As the assembly continued, the component parts fit properly with minimal filing and sanding, allowing the body to be completed easily. The roof casting was fitted but not glued in place to allow it to be removed so that the interior could be painted when the assembly of the model was complete.

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A number of additional details completed the model, including Evergreen styrene strip stock, photo-etched stirrup steps and cut levers, pre-formed wire rings, fine phosphor-bronze wire, and Tichy Train Group injected-molded styrene parts in addition to resin details included on carrier sheets. The end result was a very detailed miniature replica.

Painting and decaling were the last steps in assembling the model. The model received a coat of red spray primer that closely matched the synthetic red paint used by the railroad. A gloss coat was then applied to provide a surface for the kit's included decals. Westerfield Models supplies two small sheets of decals; one for each side of the model.

They are opaque with even the smallest two-inch scale lettering being legible. The lettering was individually cut from the decal sheets, and MicroScale Microset wetting agent was used to aid in the placement of each item. A few drops of MicroScale Microsol was applied to allow the decals to conform to the surface of the model without any haziness from trapped air under the film. When completely dry, a gloss coat was applied followed by a dull coat to provide a matte finish to the car.

Tahoe Model Works' ACF 103 trucks and the recommended Kadee No. 158 scale-whisker couplers finished off the stock car. The complete model meets the NMRA Recommended Practice of a

weight of three and a half ounces. The end result is a detailed, properly weighted, and free rolling HO-scale model of a widely used, early 20th Century railroad stock car. It took roughly 10 hours to complete the model with a significant amount of this time used to remove the flash and clean the urethane castings. Anyone with moderate modeling skills and a bit of patience should be able to successfully assemble this model with just a few common hand tools, adhesives, and model supplies.

— **GEORGE RILEY**

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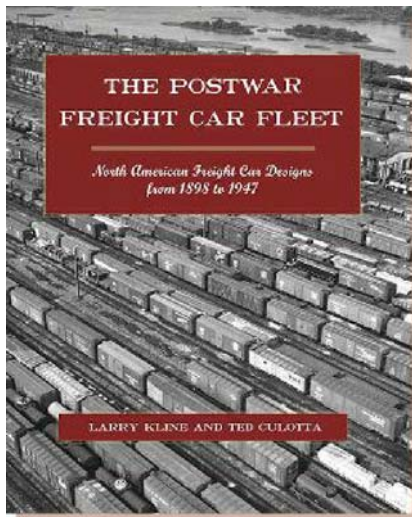
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Unused entries may be retained for future editorial use in Railroad Model Craftsman.

Mont Switzer C&O Hopper Upgrade Lindberg Composite Rebuild

A few years ago, I removed some freight cars from my active model roster because I didn't feel they were up to today's modeling standards. Among them was an old Lindberg (now Mantua Heavies) hopper car. It was a model of a composite hopper car that has been rebuilt with steel in place of the wood components. I was certain Proto2000 would offer its nicely detailed steel rebuild of the War Emergency hopper car lettered for Chesapeake & Ohio, so this older car was cut from the squad.



I recently decided to build a coal train to further enhance daily operations of my version of the Monon Railroad set in 1958. When I found myself needing more hopper cars, the old Lindberg model got another look. Detailing was pretty good back in the Lindberg Models era, and I had added

more details, paint, and lettering. With a little more upgrading to today's layout modeling standards, I could have another addition to a train that would bear little close inspection. I learned long ago to spot only my most meticulously built models on spurs close to the layout edge and within easy view-





Underbody details include modeling just enough of a center sill brake rod to be visible in profile. Evergreen 0.060 channel connects the hopper doors so that they can be opened and closed together from either side. These channels line up with the Westerfield door latches

mounted on the hopper sides. Evergreen 0.040 x 0.040 styrene was cemented to the Kadée coupler pockets to receive the coupler end of the coupler cut levers. A-Line self-adhesive weights were crammed into the voids between the hoppers to make a nice little, but heavy, car.

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Tichy corner gussets were added to the top chord of the car. The large lump coal was added to represent a load of coke.



The B end shows off lots of detail, including the Precision Scale Ajax brake wheel and air hose bracket, Hi-Tech rubber air hoses, 0.012 phosphor-bronze wire grab irons, Tangent Models coupler cut levers, Evergreen 0.080 angle stock made into slope sheet supports, state-of-the-art schedule AB brake components, wire retainer line, and real chain and rod hand brake linkage.

BILL OF MATERIALS

A-Line	29002	sill steps
Detail Associates	2206	eye bolts
Evergreen Scale Models	142	styrene strips, .040 x .040
	261	channel, .060
	292	angle, .080
Hi Tech Details	6028	air hoses, 22-inch all-rubber
Kadee	153	couplers, semi-scale short shank
Precision Scale Co.	3247	brake wheel, Ajax
	39156	air hose bracket
Tangent	TSM-203	coupler cut levers
Tichy Train Group	1102	wire, .015 phosphor-bronze
	1106	wire, .0125 phosphor-bronze
	3063	corner braces
Westerfield	1171	hopper car gate latches

ing range of my fellow rivet-counting freight car critics.

The prototype was a relatively new car built during World War II when wood was substituted for the steel allocated to the war effort. It was common practice for the railroads to convert these cars to all-steel components during the 10 years following the end of the war. This is what the Chesapeake & Ohio Railroad had done to its War Emergency composite cars in the mid-1950s. I had happened onto a C&O car still working in the early 1970s that had benefited from this rebuilding process and photographed it in hopes of creating a future model. This was before the Proto2000 models now offered by Walther's. I have yet to see or find a C&O version that was converted to all-steel, so my old Lindberg car is still the only show in town; my town, anyway.

I had detailed the car pretty well the first time around, but I updated the model with more details before returning it to service. The Bill of Materials that accompanies this article is a pretty good summary of the detail work that was done on this model. Most of the parts list is self-explanatory, but here are a few items worthy of further explanation.

The Detail Associates eyebolts were used in several locations on the model. Two of them support the handle ends of the Tangent coupler cut levers. Small bits of 0.040 x 0.040 styrene were cemented to the bottom of the coupler pocket covers and drilled with a No. 78 drill to accept the coupler end of the Tangent cut levers. Three more of the eyebolts were used to support the side sill-mounted train air line made of 0.015 phosphor-bronze wire. Although I took a



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different tack, two more eyebolts could be located in the center sill between the hoppers to support the brake rod that is visible when the car is viewed in profile. The brake rod was made from 0.012 phosphor-bronze wire.

Most hopper cars had their hopper doors connected by a steel channel so that both sides could be opened or closed at the same time. This feature also allowed a worker to open or close them from either side of the car, and usually was also part of the latching system. The Evergreen 0.060 channel was used to model these channels. Cut them slightly over length so that they will accommodate the Westerfield hopper door latches.

The 0.080 angle stock was used to make the slope sheet support braces. This often-missed detail is a cut-and-fit proposition that is well worth the time. Other details in this area include schedule AB air brake components. Better quality AB brake details like those offered by Cal Scale or Tichy are recommended. I cannot recall the source of my upgraded components.

My model was lettered with Champ Decals, but I'm sure Micro-Scale or another specialty railroad decal manufacturer will have what is needed to letter the car. I decaled over the dimensional data to make the car appear to have been reweighed on the Monon during my designated year of operation. Since

the car was already weathered, the new lettering from the re-weighing is obvious as it should be.

The last detail worthy of mention is the load. The Lindberg model came with a removable molded black styrene coal load insert that just wasn't all that good. Since the insert was of the proper color and shape, I simply painted it with Elmer's glue and poured on HO-scale coal for the correct effect.

Getting new freight cars ready for the layout is always a lot of fun, but don't forget those hidden treasures from your past that you thought were buried and gone. Some of that older detail work holds up pretty well today. **RMC**

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WhiteRiverProductions



Choosing Your Prototype

Why do we choose to model what we do? The reasons are as varied as the number of model railroaders. When I am a guest visiting a model railroad for the first time, I always wonder why my host chose to model what they did. I want to know what went into their decision process. If given the opportunity to talk one-on-one, I will ask a lot of questions. Why do they model this local? Why model this railroad(s)? Why this period? What were the influences? How did they come to the decisions that they reached?

Sometimes the scenery possibilities have a lot to do with the decisions made. The Rocky Mountains, Pacific Northwest, and Appalachian Mountains are all popular choices. One can create some breathtaking mountains and a lot of rocks and trees. However, I have seen some beautiful layouts modeled after other geography such as Florida, Southern California, and Iowa, or urban areas or seaports.

Often those model railroads in urban settings offer a lot of switching, car movements, and logistical challenges. They pack a lot of operations into a smaller space. The desire for realistic car movement and the challenge of operations is a deciding factor. Yet-to-be-answered are the questions of why this part of the country, this period, this prototype?

Some choose a smaller branch line, whether it be one of today's short line railroads or a narrow gauge logging or mining railroad set in the 1890s for the relaxed pace, fewer operators available, and those same challenges of switching cars in and out of industries and to the interchange. This type of railroad can be very rewarding to build and operate.

We have a lot of choices as to what we model in terms of the location, type of operation, gauge, scale, time period, type of equipment, sources of traffic, and oper-

ating patterns. Perhaps one chooses what they model because they like Southern or Norfolk & Western high-hood diesels. Maybe you are an Alco aficionado. Possibly you love a particular paint scheme. Perchance a wood-burning narrow gauge steam engine makes your pulse rise, or some other type of equipment or operation is of interest to you. We have more choices in the types of equipment and road names for locomotives and rolling stock than we have ever had. And there is always the option to custom paint and letter if it is not produced in your favorite road name.

I am often curious when one selects a location and prototype that is miles from where the model railroad (and where the builder) is. I once asked my host why this locale so far away; you never lived there. His reply was very easy to understand. "When you fall in love, it is just hard to explain."

Frequently, our model railroad creation becomes a time machine transporting us back to our earlier years when we first became aware of railroads and trains. It allows us to relive those times trackside or down at the station, or days we were out scouring around taking photographs and hoping that the lens was in focus and that the exposure was properly set. For me, it revives the memories of a farm boy watching Louisville & Nashville's *Hummingbird* or Pan-American rush by the small town station and the stockyards near our farm. Memories of my first train trip taking the local to Cincinnati Union Terminal and a cab to Crosley Field to watch the Reds play baseball, and of my older cousin Jimmy and I running from his house down to the station to wave at the crew coming through. Great memories, all.

Mark Juett



My earliest memories of any railroad were of the Louisville & Nashville. L&N's paint scheme since 1962 (with many variations) was yellow and gray. It was replaced with the dark gray with yellow and red stripes of the Family Lines. I have many units painted in this scheme and its variants such as this SW7. I also have units in the older all-black, black with cream stripes, and blue and cream.



A regional NMRA convention in Cincinnati, Ohio, provided an opportunity to gather more prototype research and photograph these Alco C-420 units in DeCoursey Yard — L&N's largest — in nearby northern Kentucky.

Perhaps chasing and photographing a fan trip, such as this one pulled by NW 611 from Kansas City to Moberly, Missouri, will provide inspiration and information to model an earlier period that you may not have experienced firsthand.



Weathering a Los Angeles Junction CF7



Setting a Strategy and Prioritizing Your Techniques

CRAFTSMAN/Lance Mindheim, photos by the author

Idling

CF7 2619 idles on the LAJ's Horn Lead awaiting its next move on Lance Mindheim's office switching layout. Grasping the importance of weathering and establishing a strategy going in is the key to a successful outcome.

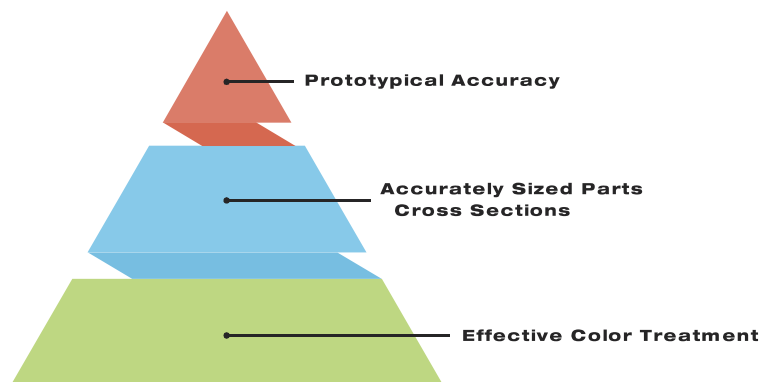
A decade or so ago, I came across a series of photos in a now-defunct prototype modeling magazine that totally changed my approach to creating a visually realistic-looking piece of rolling stock. Like many, I was focusing all my energy on detailing. The article featured a unique format for a weathering contest. The catch was that the entrants had to use an out-of-the-box, totally stock model as the subject — grossly oversized molded-on

grab irons and all. I was mesmerized by the quality of the entries and how breathtakingly real they appeared, particularly given the crude nature of the underlying models. They were just stunning. From that point forward, the blinders were lifted, and I came away with the realization that:

The largest contributor to a model's visual impact is color treatment.

Yes, prototypical accuracy matters and is a rewarding pursuit

in and of itself. However, when we're talking about what catches the eye and triggers the brain to make what Malcolm Gladwell terms a "decision in a blink" as to a model's realism, color treatment trumps all else. Every rivet, every grab iron could be correct, but if the coloring is off, the end result will miss the mark visually. If a small detail is omitted or even slightly incorrect, the brain won't pick up on it and then only after close examination by somebody knowledgeable about that particular prototype. Here's a test. Don't cheat and look at the photo of the CF7 just yet. Did you notice that the two of the four brake shoes had been removed to match the prototype? Did you notice that two of the stacks had been removed? Probably not. You were drawn to the color, the fade, the peel. Although not always thought of in those terms, color is a prototypical element just as much as brake



rigging is. In fact, it is arguably more important from the standpoint that it covers a much larger area and is more noticeable.

When we first look at a model, we subconsciously make a snap decision as to how realistic it is. The lion's share of that decision is determined by how effective we handle the color treatment and weathering. Next is the absence of overly thick or crude details such as thick grab irons, moulded-on grab irons, or overly thick hand rails. After that is exact, prototypical accuracy.

While pursuing the detailing aspect of prototypical accuracy is rewarding in its own right, when we are talking about what catches the eye, color trumps detail and does so by a wide margin. If the approach is simply to "match rivets" part-by-part with coloring as an afterthought, you'll be dissatisfied with the end result. That being the case, it makes sense that we do everything in our power to improve our color interpretation and weathering skills. Easier said than done. It is far, far easier to neatly apply a prototypically correct roof-mounted air conditioner than to do a convincing job of weathering.

To create an effective overall modeling result, you have to

have an overall strategy going in. You can't just airbrush some Floquil grime on the lower half of the model and check the weathering box off of your assembly to-do list. Taking such a shortcut will result in what I call "model railroad weathering." We are striving for creating a sense of mass, something that looks "heavy" in a photo. Examine photos of your subject closely over several days. Each case is different from the standpoint of what makes its specific weathering pattern unique. Try to identify what's going on from a color standpoint. Try to answer the often elusive question of, "what color is that, really?"

In the case of the CF7 in the following article, I came to the conclusion that the two color effects that draw your eye in more than anything else are the faded, mottled, peeling blue hood, and the faded yellow cab. I've also learned from master weathering artists that creating contrast through the careful application of washes is critical. Mentally, I broke the project down into two phases and approached it with the mindset that I was dealing with the proverbial 80/20 rule where the lion's share of the results would be determined by how successful I was with applying the fading



and wash. The other 20 percent, while important, was less so for the sake of final appearance. As you read ahead, I'll break things down into two parts, the important "80 percent" (the fade, peel, and wash) and "everything else."

Blue Fade and Peel

The most distinctive visual feature of the prototype is the faded, peeling, and mottled blue paint. It was also the most challenging to model. Fading dark blues, greens, and reds isn't easy. Trying to fade by overspraying white with an airbrush generally ends up looking like just that — a model railroader sprayed on white paint. Peeling paint is equally challenging. Dabbing on colors with a brush, no matter how carefully done, also looks like you "dabbed on colors with a brush." It's very hard, if not impossible, to achieve the ragged edges of peel with a brush. After

LAJ CF7 2619

Craig Walker caught the 2619 at Vernon, California, between assignments on April 25, 2009.



Visually Interesting

The use of faded paint, and other weathering techniques make this model believable and interesting. Notice the faded paint and the darker touched-up side sill.

a lot of trial and error over the years, I've come to the conclusion that the most effective way to fade a dark color is to work with an application of a lighter version of the base color. Pink for red, light blue for dark blue, and so forth.

Since the peeled mottled look is the most distinctive feature of this locomotive, I gave the most attention to trying to find a way to model it. I can't emphasize enough the importance in these cases of practicing on a scrap shell or piece of painted styrene to perfect your technique *before* moving onto your model!

The first step was dealing with the faded blue. After studying the photo carefully, I determined that the hood was a combination of ragged bands of the original dark blue mixed with light blue fades transitioning from a heavy fade on the roof and upper hood to less fading lower on the cab. As I mentioned, fading dark blue with white or grime won't work. Instead, I chose to represent the fade with Model Master "Intermediate Blue." It's important to emphasize that you want the acrylic version of the paint, *not* the enamel version. We'll be applying an oil wash in a later step, and the acrylics will resist the wash; enamels and lacquers will erode. Install your smallest airbrush needle and dial it down to its tightest setting.

Remember that the paint spray comes out in a cone, so the closer you have the spray tip to the model, the smaller the paint pattern will be when it hits the surface. Keeping this in mind, I set the pressure at 20 psi and positioned the airbrush tip about an inch and half from the surface. Working in careful short bursts, I covered much of the top of the hood with blue and then carefully worked blue bands down the side of the hood with vertical strokes. The spray pattern at the point of con-

Shop Tips: Mr. Color Thinner

Practice Platform: *I painted a scrap of styrene with dark blue, waited for it to dry, and followed up with an overcoat spray of Model Master Intermediate Blue. The lighter blue will be used for the faded portions of the model.*



tact was only about 1/8-inch wide, so I found I had enough control that I didn't need to use any masking tape.

Now for the peel. The only thing that will really work is to actually peel the just-applied Intermediate Blue off. But how to do it? The paint grips almost immediately.

After much trial and error, I finally found a technique that gave the results I wanted. The trick is to find a way to soften the paint just enough that you can actually peel it off in a convincing manner.

To soften the paint, I used a product called Mr. Color Thinner. Be aware that this is a fairly aggressive chemical that has to be used sparingly. Once again, I practiced the peel technique many times on a scrap first. If you skip the practice, you do so at your own risk, and I can say with a fair degree of certainty that you'll regret it!

Begin by creating a practice platform. I painted a scrap of styrene dark blue followed by an overspray of the Model Master Intermediate Blue that I'd be using for the faded blue.

Using a half-inch wide flat

brush, apply a thin, moist film of the Mr. Thinner. The Mr. Thinner is aggressive and acts quickly, so you once you've passed an area once with the brush, don't go back again or the paint will smear. Make one pass to apply the film, and that's it.

At this point, the Intermediate Blue is soft (and very unstable). Time to "peel" it off. Take a cotton swab, and just barely "kiss" the surface to remove paint. Dance it around a bit. Make sure you don't tap too hard or move the swab across the surface, or it will smear. Lightly tapping the surface with your flat brush will also work. Once you have the pattern you want, let the thinner dry. This takes only a few minutes.

Yellow Cab Fade

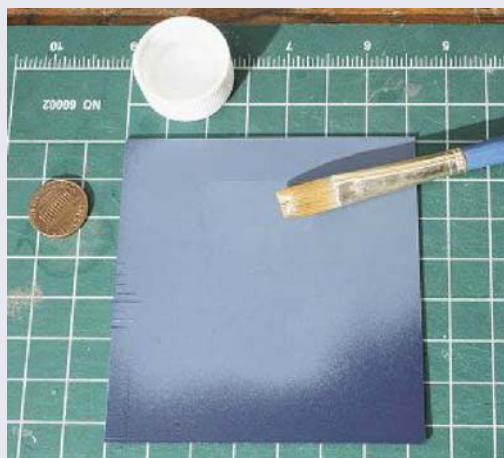
One of the more distinctive features of the prototype is the faded yellow of the cab. It is not overly successful to fade paint by overspraying white or dust on the base color. As I mentioned with the faded blue, I've gotten better results applying a light overspray of a lighter version of the base color. The same applies to the

Mr. Color Thinner

is used to soften the paint on the model. Be aware that this fairly aggressive chemical needs to be used sparingly. A few practice rounds will help you become familiar with the chemical's traits.



Applying the Thinner: *Using a half-inch-wide flat brush, I applied a thin, moist film of the Mr. Thinner. The thinner is aggressive, so only pass the brush over an area one time. Basically, one pass with the brush will do.*



Peeling the Paint: *Once the thinner is applied, the Intermediate Blue is soft and can be peeled away with a cotton swab. Gently tap the surface with the swab or a brush until you have attained the finish you desire. Once finished, simply let the thinner dry.*



yellow. I had a still-good bottle of the Old Polly Scale Catwhisker on hand that fit the bill for a pale yellow. If you can't track down any of the Catwhisker Yellow, you can mix your own by pouring some flat white into a bottle and slowly adding any yellow until the color starts to come up. I thinned the paint slightly until it had the consistency of water (as opposed to milk-like). (As with the blue, you want to be sure you're using acrylics so that the oil wash we'll be applying in the next step won't erode them.) The hardest part of the job was the tedious task of masking off all the blue using Tamiya masking tape. It's not possible to mask the numbers. I noticed on the prototype that the side rails are an un-faded yellow, so I masked those off also.

Turn the airbrush to its smallest volume setting. Holding it a few inches away, and using a wand-like motion with short puffs, I misted the lighter yellow over the base color. I stayed away from the cab numbers as much as I could. Immediately after puffing on the light yellow, I took a tooth-

pick, dipped it in thinner, and carefully wiped any excess spray off the cab numbers. If you're really ambitious, you could add decals of new numbers on the cab side, which would have the advantage of having zero overspray on the numbers. I wasn't *that* ambitious!

Oil Wash for Contrast on Yellow Cab

At this point, the model will still have a "model railroad" look to it. By that, I mean it doesn't have a sense of mass that characterizes a full-scale locomotive. To get around this, we need to find a way to insert shadows into the cracks and crevices. We also need to create the subtle rust haze and bleed. Enter the wash of artist oils thinned with mineral spirits — one of the easiest, effective, most-bang-for-the-buck techniques we have in our arsenal. For those who haven't used them before, artist oils are one of the simplest and most forgiving mediums to work with.

Oil washes flow on like silk and seem to have a natural tendency to gravitate to the right place in the right pattern. You have a fair amount of working time, so if you have any errors or unrealistic patterns, they are simple to wipe off. The two tricks to using the wash technique effectively are: keep the wash thin and subtle, and stick to two colors — burnt umber and black.

Put a small dab of burnt umber on a scrap of styrene. Pour some mineral spirits in a small cup, and dip in a half-inch brush to moisten it. Tap the moistened brush in the oils, creating a small thinned pool of paint. The wash



It's All a Wash

Using a small dab of burnt umber mixed with mineral spirits created a wash for the locomotive. Tap the moistened brush in the oils, creating a thinned pool of paint. The final mix should look like diluted coffee.

Oil Wash

A burnt umber oil paint was applied to the entire locomotive body using a wide brush. The process is fairly forgiving because you can always add more or remove what has been applied thanks to mineral spirits as a thinner. The application should be from top downward.



Spot Detailing

After the main application of the oil wash, a toothpick was used to touch-up bolt heads and other small details that tend to rust on the prototype.



Detail Accenting

A small brush was used to add the thinned wash to specific detail areas such as the knuckle buster door latches. The wash will naturally settle into the low spots.



should be thin and have the look of heavily diluted coffee.

Starting at the top of the cab, gently brush the burnt umber wash downward over the yellow surface of the cab. Repeat the same wash technique with an even thinner wash of black on the blue hood sides. (Note: prior to applying the black wash on the hood sides, I slightly distressed the LAJ lettering by lightly scraping them with vertical strokes with the back of a No. 11 blade). When getting the sense for the right consistency, err on the side of too thin. If you get it wrong or too thick, wash some straight mineral spirits across the surface and try again.

One of the advantages of oil washes is that they have the tendency to naturally and easily create rust bleed. After the initial burnt umber wash is applied, tap a toothpick in the burnt umber oil and apply tiny dots to a few bolt heads, along the vents, pipe joints, hand rail joints, and then apply a drop of straight mineral spirits with a small brush to create rust bleed.



Running Gear Treatment

The trucks were painted with Model Master silver. The silver on the prototype tends to chalk out, losing its silver appearance. To achieve this, I washed the trucks with a mixture of burnt umber followed by a 50/50 mix of black/brown weathering powders.



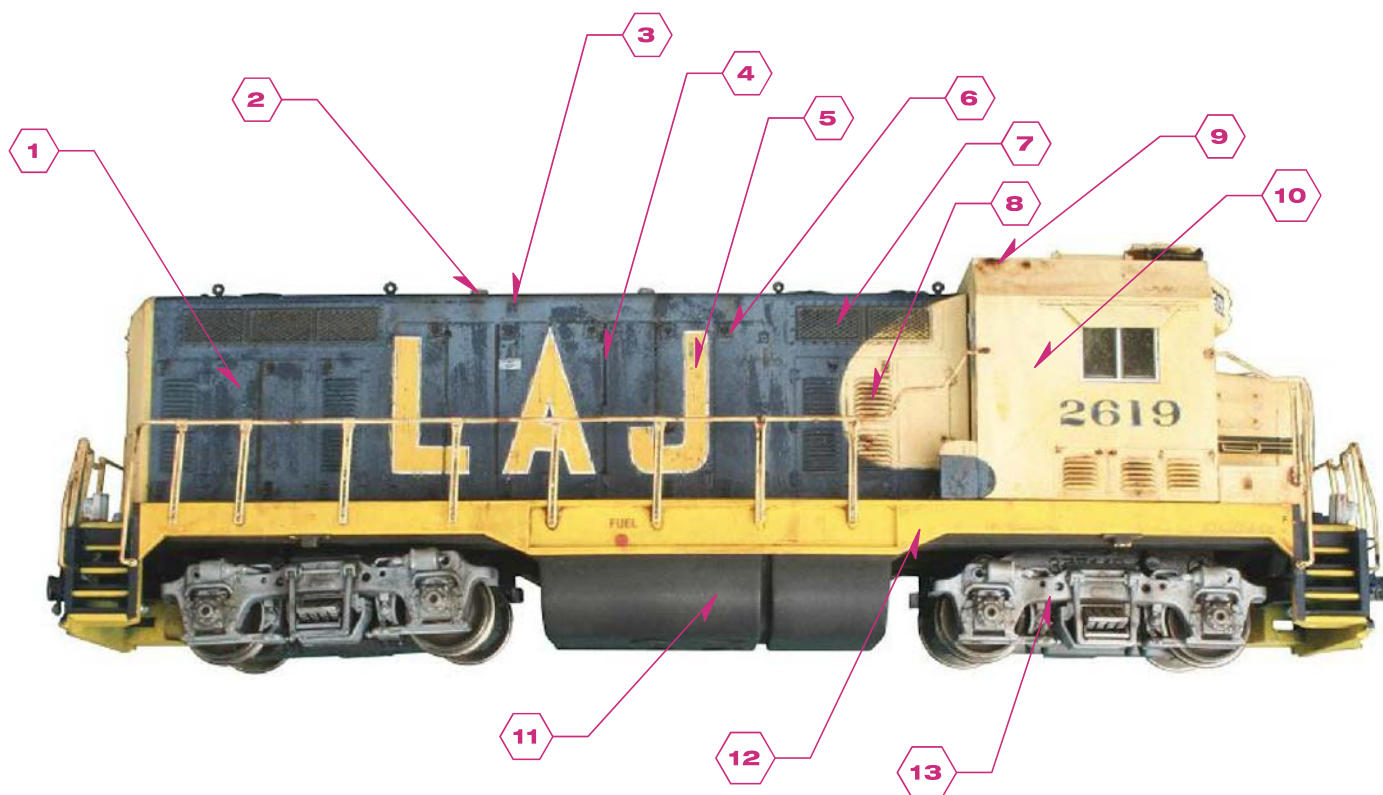
Fuel Tank

The fuel tank was repainted with Rustoleum Dark Gray Primer from a rattle can. The vertical weathering pattern was added using a brush and the 50/50 mix of black/brown weathering powders.



Believable

The 2619 rests under the hot California sun between spotting and pulling cars. The crew is enjoying that rooftop air conditioner.



1. Intermediate Blue “fade” with subsequent peeling technique.
2. Stacks are painted Model Master light gray and weathered with chalk.
3. Weathering chalk lightly applied to roof corners.
4. Wash of black artist oils inserted into cracks and crevices with a small brush.
5. Lettering distressed with a No. 11 blade.
6. Black artist oils washed into latches.
7. Grilles painted Model Master US Army Helo Drab and then washed with oils and dusted with chalk.
8. Additional dots of burnt umber washed into grilles.
9. Additional dots of burnt umber speckled on roof followed by a drop of mineral spirits on the oil dot.
10. Cab weathered with a light overspray of thinned Polly Scale Catwhisker Yellow.
11. Fuel tank painted with rattle can Rustoleum Dark Gray primer followed by vertical weathering powder streaks.
12. Side sills were not given the pale yellow fade but were given a burnt umber artist oils wash.
13. Trucks were painted Model Master silver and then weathered with a wash of oils and chalks.

Referring to the old 80/20 rule, the majority of the visual impact of this model comes from the three techniques discussed thus far: the faded blue/blue paint peel, the faded yellow cab, and the final burnt umber oil wash.

Now, we’ll move to the other 20 percent — areas where weathering certainly makes a difference, just not as much.

In this phase, I make extensive use of weathering powders but limit the color palette to one shade, a 50/50 mix of Bragdon “weathered brown” and “soot black” weathering powders. Don’t be misled by the chalky nature of

the powders; they bite pretty hard into the paint and can’t be totally removed, so proceed with a light touch.

Hood Roof

Mask off and paint the stacks Model Master Light Gray. Tap a cotton swab in the chalk mix and then rub most of it off on a rag. Lightly tap the chalk-stained swab around the top of the stacks, lightly smudging it. Now for the roof. Take a quarter-inch-wide old, stiff brush, dip it in the chalk, and smear it into the roof around the stacks using a stabbing motion. Next, put some chalk on a

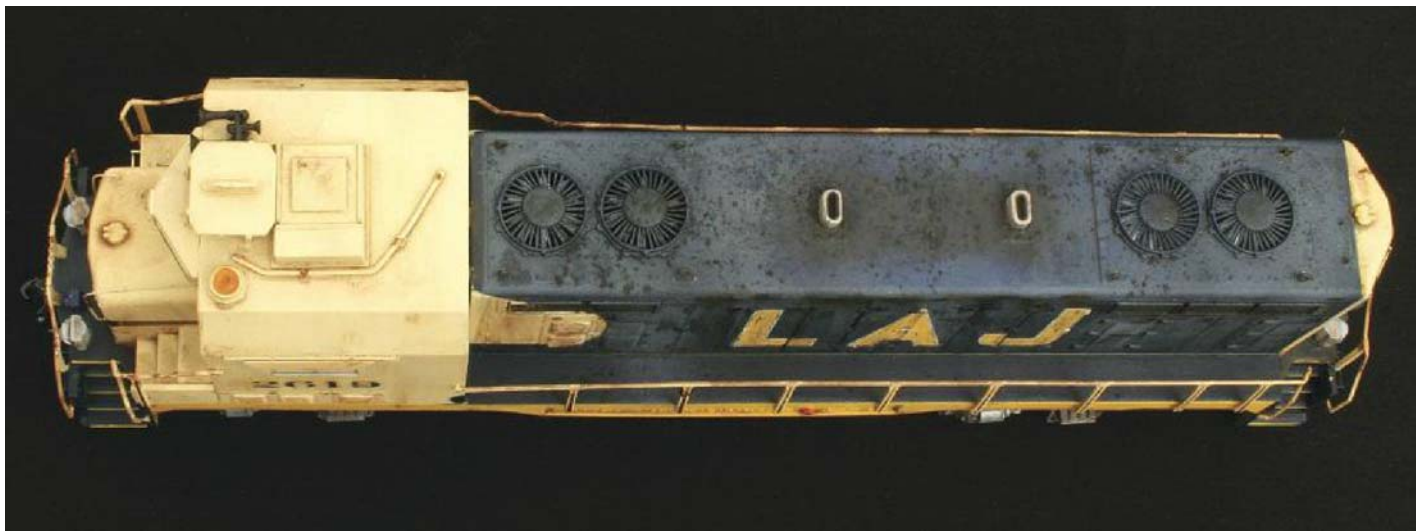
3x5 card. Spray the hood top with Dullcote and then, using an X-acto blade, immediately flick specks of the chalk onto the still wet Dullcote to represent rust pitting. Seal it again with Dullcote.

Trucks

After trying to get fancy with Alclad II Lacquers, I came to the conclusion that the best results were obtained with plain old Model Master “Silver.” Although many of the prototype photos show a relatively bright, un-weathered look, silver doesn’t really scale down and has a tendency to look toy-like. It wasn’t too much of a leap to find other road numbers whose trucks were more weathered. After the silver had dried, I gave the trucks a thin wash of burnt umber oils, which I let dry. Next came an even thinner wash of black artist oils. Finally, I worked in the 50/50 mix of black/brown weathering powders.

Fuel Tank

The fuel tank was handled with a simple rattle can spray of Rustoleum Dark Gray Primer. After



it had dried, I worked in vertical streaks of the 50/50 mix of brown and black weathering powders using a stiff brush.

Hood Grilles

Mask off the vents with Tamiya masking tape and fog on the MM helo drab. Some of the yellow striping should still show on the front vents. Using a small, old stiff brush, smear some chalk into the grilles. Finally, apply a wash of dilute black artist oils.

Roof Edges

The prototype has hints of hazy rust on the rounded edges of the roof. I dipped a cotton swab in my weathering powder mix and then taped off most of the powder. I then tapped the swab here and there in patches a quarter-inch wide or so along the hood roof rounded corner.

Latches and Cracks

I added additional contrast in the cracks of the side hood door panels and latches using thin black artist oils. Using a small size 0 brush, I carefully added a thin pool of black artist oils in each latch. I also worked some black into the cracks of the door panels using a thicker wash, which I let dry a few minutes and then partially wiped off using vertical strokes of a mineral spirits-soaked Q-tip.

Weathering Tips (Learned the Hard Way!)

- Know when to quit. When in doubt as to whether you've applied enough weathering, quit for the day!

- Work in light, subtle layers. You can always add more color, but subtracting overdone weathering is often impossible.

- Study photos carefully, and try to determine what weathering patterns catch the eye and what colors you are actually dealing with.

- Fade with a lighter version of the base color, not white.

- Before starting, ask yourself, "what could go wrong?" Often, it's a long list! To that end....

- Practice off the main subject on scraps.

- Be aware of the composition of the paint you are using (enamels? acrylics?) and what will be going on top of what. If you use enamels and then apply an oil wash over them, the oils will erode the underlying paint.

- Make extensive use of thin, dark washes to create contrast.

- Focus on the use of the burnt umber and flat black color palette. Use pumpkin oranges and raw siennas sparingly, if at all.

- Be aware of the 80/20 rule. That is, what patterns and colors create the lion's share of your particular modeling subject.

- Refer to Rule No. 1: know when to quit for the day! **RMC**

Roofline

The exhaust stacks were masked off and painted with Model Master Light Gray paint. A 50/50 mix of Bragdon weathering powders was used for the roofline. Weathered brown and soot black were mixed prior to application. A cotton swab was lightly tapped around the top surface of the stacks. An old, stiff brush applied the mixture to the locomotive roof around the stacks. I used a stabbing motion for most of the application. The model was oversprayed with Dullcote and an X-acto blade was used to "flick" specks of chalk onto the still-wet Dullcote, representing rust pitting.

MATERIALS LIST

Bragdon Weathering Powder

Soot Black	(1 Package)	Item No.
Weathered Brown	(1 Package)	FF-64
		FF-69

Polly S Paint (or equivalent pale yellow)

Pale Yellow

Model Masters Paint

Intermediate Blue	(Acrylic Only)	Item No.
US Army Helo Drab	(Acrylic Only)	FS35164
Silver		FS34031
		4678

Mr. Hobby

Mr. Hobby Thinner	Item No.
	250

Cotton Swabs

Tamiya Masking Tape

Chicago Great Western

The Quiet West End

CHICAGO GREAT WESTERN



CRAFTSMAN/Mike Porter, photos by Dan Munson

High Bridge

Train No. 14, occasionally referred to as the "Garter Snake," crosses the high bridge at Ft. Dodge, Iowa. The 15-foot-long structure was built by Miles Hale, MMR and Ron Parker.

As all good railroad stories start out: "No kiddin' — this really happened!" I was contaminated with railroad operations from birth. I'm a third-generation railroader. My father hired out on the Chicago Great Western (CGW) at Clarion, Iowa, as a janitor/bag-gageman. He worked a few years on an extra board, filling vacancies at towns stretching from Hayfield, Minnesota, to Council Bluffs, Iowa. He concluded his career as a General Clerk with duties mimicking that of a yardmaster at Fort Dodge, Iowa. My

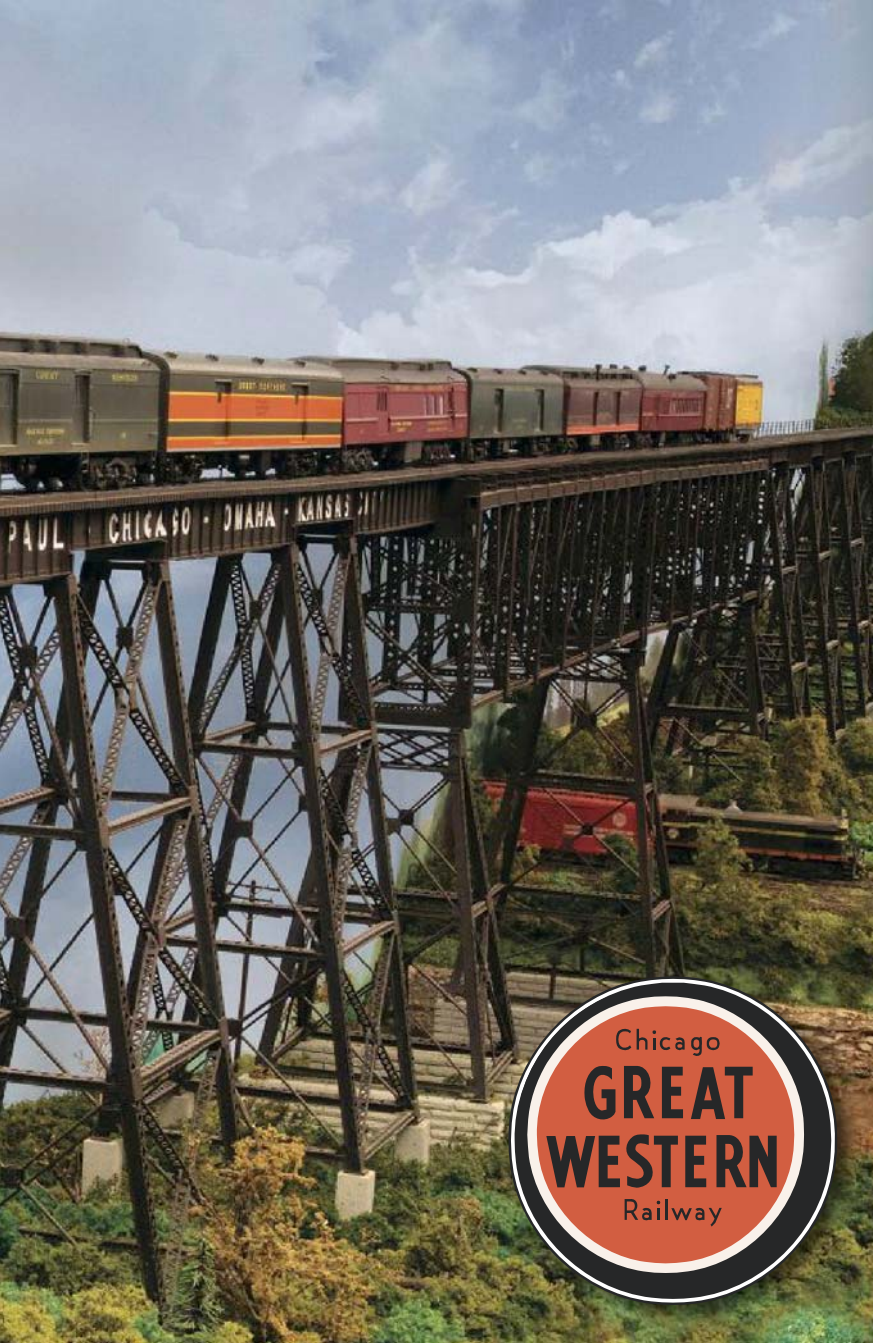
maternal grandfather hired out on the CGW as a leverman, telegrapher working a few years at towns along the Northern Division of the CGW and concluding his career as a station agent at Clarion, Iowa.

In the Beginning

I was drawn into the model railroad operational world at the age of 10. My father brought home a basic American Flyer Lines train set for me, and the flame was lit. Over the years, the basic set grew with the addition of more en-

gines, rolling stock, and signals. That same year, my grandmother took me on a train trip from Fort Dodge, Iowa, to Clarion, Iowa, and it was like throwing gas on a fire; I was off and running. At the age of 12, my father took me to Minneapolis on the train, and I drank in every sight, sound, feel, and smell of railroad operations.

In my neighborhood, I was spreading the word of the model railroading hobby. I was wiring up layouts with sophisticated DPDT toggle switches to configure layouts so that we could run



two engines with two transformers on the same track and not interfere with each other. I used toothpicks to replace the metal track pin connectors to isolate the track sections. At age 16 came my introduction to switch lists that Dad brought home from work. In addition, I would bike down to a bridge that spanned the switching lead of the Illinois Central Railroad, and I'd watch the switch crews use hand signals and switch cars. I'd also pedal down to the Minneapolis and St. Louis Railroad yards, and from

my perch on the ice dock, I'd observe the switch crews at work. That same year, I made several train trips on the CGW to Minneapolis and Omaha.

Railroading for Real

At 17, I became a student telegraph operator at two of the area depots in the Fort Dodge, Iowa, area. At the age of 19, I hired out as a switchman on the Illinois Central Railroad at Fort Dodge. I was issued a rule book, an employee's timetable, and a switch key. I purchased a 21-jewel

watch, my own Conger lantern, and I started my career as a railroader on November 28, 1962. I protected work on the four switch engine assignments at the Fort Dodge Yard along with extra work on three road districts: the Waterloo, the Cherokee, and the Omaha districts.

With the implementation of Public Law Board 282 (a major crew reduction ruling), I lost my protected employee status. I quickly applied for and was hired as a brakeman on the Minneapolis and St. Louis Division of the Chicago & North Western. I protected work on the Albert Lea, the Spencer/Estherville, and the Des Moines road districts and once in a while the sole switch engine assignment at Fort Dodge. That position became at risk, so I went with my hat in my hand and applied for a Union Electrical Journeyman Apprenticeship position at a shop owned by a former switchman for the M&St.L.RR. I worked as an apprentice electrician while attending the required IBEW night school. Four years later, I graduated with a Journeyman Wireman certificate.

I worked in the building trades for nine years until one day the C&NW called me back for training as a locomotive fireman. One year later, I attended the formal Locomotive Engineers School in Chicago. After another six months of on-the-job training, I graduated with a Locomotive Engineers certificate. I worked on the largest geographical seniority district on the C&NW, which included 19 terminals. I worked 13 of those terminals until the C&NW was ingested by Union Pacific. During my long career, I dreamed and planned for a model railroad layout someday.

Building a Home to House the Model Railroad

At the age of 61, my wife Susan and I built our retirement home despite the fact that I had not of-



ficially retired yet. We specifically designed the basement for a model railroad, and we constructed a home above it to meet Susan's wishes.

All the utilities for this all-electric home are centralized in the middle of the basement area — a practice I learned from several other model railroaders. We opted to have the garage floor and the front porch suspended so that we could take advantage of the room underneath. In addition, we had the foundation contractor block out four small openings in the concrete load-bearing walls to accommodate the easement of a model railroad right-of-way. The final basement measurements are 75x35-feet. It is noted that one of the local modelers suggested a major location change for the mechanical room and the basement restroom in the early phase of construction. He was looking ahead and noted that if a 30-foot Fort Dodge downtown peninsula was going fit the track plan, then we needed to shift the walls of the two adjoining basement rooms seven feet from the original location. The architect was summoned, and the change was made on the spot. My original concept was an around-the-wall main track with the Fort Dodge industrial peninsula as the focal point: obviously, I was looking at a small picture tube.

Preparatory Investigation and Layout Planning

During the first two years living in our new home, I prepared for the layout by interviewing several retired CGW employees. With a lot of assistance, I checked out Sanborn Fire Insurance maps, Iowa Cemetery Maps, Google satellite images, and made trips to some of the town sites. In addition, I drew up many freehand drawings of the layout. With all these preparations, I was not fully armed to face the task of orchestrating the construction of a huge model railroad.

The Layout Begins

Two years after the home construction was completed, I decided to start the layout. To say "it takes a village to build a large layout" would be an understatement. My last count determined that 65 individuals participated in one form or another with the building of the layout. Initially, I hired a professional contractor to finish the basement walls and to install a dropped T-bar ceiling. Before the sheetrock was installed on the walls, I installed three 20-amp GFI-protected circuits for receptacle outlets installed on 12-foot centers. All the receptacles are switched from a centrally located power contactor. This gives me the ability to de-energize all the receptacles on the three circuits from one switch. This safety precaution gave me the peace of mind should any soldering irons or other equipment be left plugged in by mistake.

I prewired the ceiling lighting into eight lighting circuits. I chose to install two-bulb 2x4 fluorescent drop-in fixtures. I decided to use the T-8 lamps with a 3,500K rating, and it has proven to be sufficient to date. In addition to the walls and the dropped ceiling, I enlisted the contractor to build the original 23-foot Downtown Fort Dodge peninsula, which was later extended to 30 feet. This 12-city-block peninsula represents a small part of my wife's and my hometown.

After the walls, ceiling, and lighting were completed, I enlisted the help of 12 local modelers who had many years of layout building experience to help me make the layout a reality. I marked off work every Thursday for one year. The handy crew of 12 individuals put the benchwork together, laid track, and installed and hooked up track drops. I helped wire the layout, but mostly I functioned as a go-fer barely staying ahead of the crew with tools and materials. Susan graciously provided the meals. As stated earlier, at the

onset, I was looking at a small picture tube while the crew was looking at a much larger picture tube.

Before we started building the benchwork, it was suggested that I purchase at least three of each kind of tool needed to complete the project. This rule has saved a lot of time and legwork for the Go-Fer. The majority of the layout benchwork is basically boxes built with 1x4-inch pine connected to each other. The benchwork was put together with sheetrock screws; we predrilled all the holes for the screws.

Most of the cross members were predrilled for the bus wires before installation. We drilled two ¼-inch holes about 12-inches apart for the bus wires, and we also drilled out a 1¼-inch utility opening between the two bus line holes to accommodate signal, telephone, and DCC cable wiring. This opening has been invaluable. The predrilled cross members were installed on 16-inch centers to maintain overall strength. The narrow benchwork was cantilevered directly from the wall studs. Some of the wider benchwork was attached to the wall studs and supported by a knee brace. There are portions of the benchwork cantilevered to both sides of the view block wall.

Modeled Territory

Since I lived along the West End of the CGW (Clarion, Iowa, to Council Bluffs, Iowa) for 36 years, it was natural for me to want to model what I knew. I chose 1967: a time one year before the corporate ingestion of the CGW by the Chicago & North Western System. At this time period, "covered wagons" still ruled the locomotive roster (the CGW referred to the diesel locomotives as Motors), but the herd had been invaded by eight GP30s and nine SD40s.

In 1967, the two passenger trains that I had ridden multiple times on my dad's system pass had disappeared from the

west end. This was a result of the cancellation of the United States Postal Service mail contract. I took modeler's license and extended the mail contract to retain the two underutilized trains, and this wink of the eye added some operating value to the op sessions. In 1967, there were still two time freights (mortgage lifters) that were actually bridge route connector trains between Union Pacific at Omaha and the connecting roads at Minneapolis, Kansas City, and Chicago. These time freights actually performed some local work on a regular basis. There was a six-day-a-week turnaround job that worked from Clarion to Fort Dodge and return with an occasional trip west as far west as Rinard, Iowa. The once-a-week west local that operated only on Wednesdays from Clarion to Council Bluffs was gone, and in its existence its main purpose was to position a train and engine crew, the motors, and a crummy for the once-a-week Thursday night hot meat train that operated from Council Bluffs to Clarion. It continued on with a new crew to Oelwein, and then consolidated with a Minneapolis meat train and a Kansas City meat train for the final leg to Chicago with connections to the eastern market. These two trains disappeared shortly after the passenger trains were discontinued. The West End was a quiet, laid-back operation to say the least, and if operated prototypically, an operating session might last about 1½ hours. I enhanced the model operation to stretch out the fun value of the CGW.

In our basement, the single main track extends from Coulter, Iowa, on the east end to Roelyn, Iowa, on the west end and from Clarion, Iowa, to Belmond, Iowa, on the northern connection. The three staging yards are labeled Chicago on the East end, Omaha on the West end, and Minneapolis on the North end. There are two working main yards on the system: Clarion, the division point with three lines radiating from it, and Fort Dodge, which is the industrial yard that services 17 industries. There are 11 small elevator townsites on the 350-foot single, unsignalled main

er); and a hint of the Rock Island, which services two townsites.

We started building the layout near the middle of the system at Fort Dodge with the industrial peninsula as the signature feature. The peninsula hosts the CGW with alley and street running, which serves 17 industries. Also, the peninsula hosts the FDS with running in the muddy side street, and it serves 14 industries.

From Fort Dodge, we worked in both directions. The area where the high bridge is presently located was our temporary staging. Building from the center allowed us to operate some early



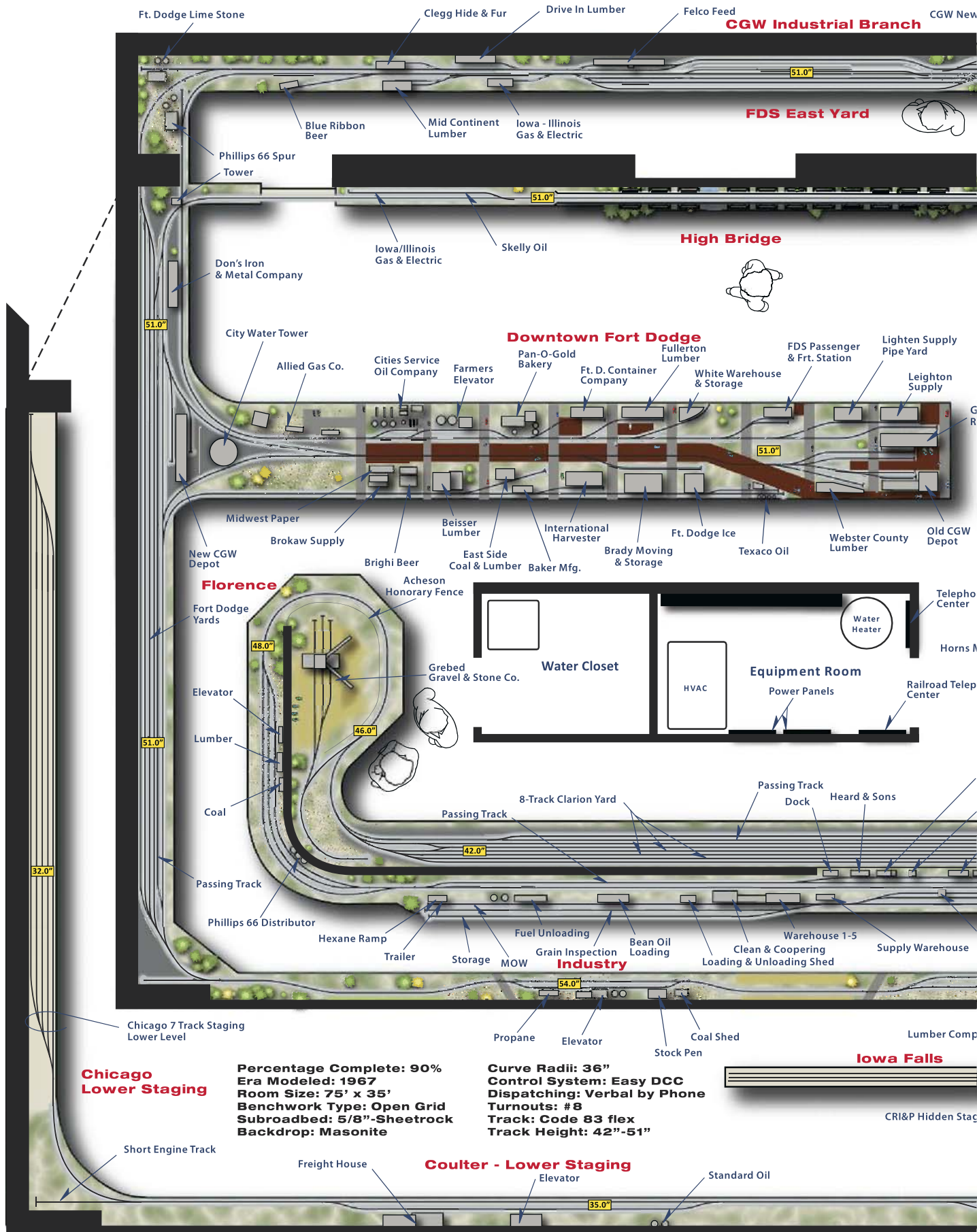
track with six generous sidings to pass trains. Also in the basement, there is a large presence of the independent Fort Dodge–Des Moines & Southern railroad; a smaller presence of the Chicago & North Western Railroad at Eagle Grove, Iowa, which services a soybean plant; the Minneapolis & St. Louis Railroad at Belmond, Iowa, which also services a soybean plant (story about that lat-

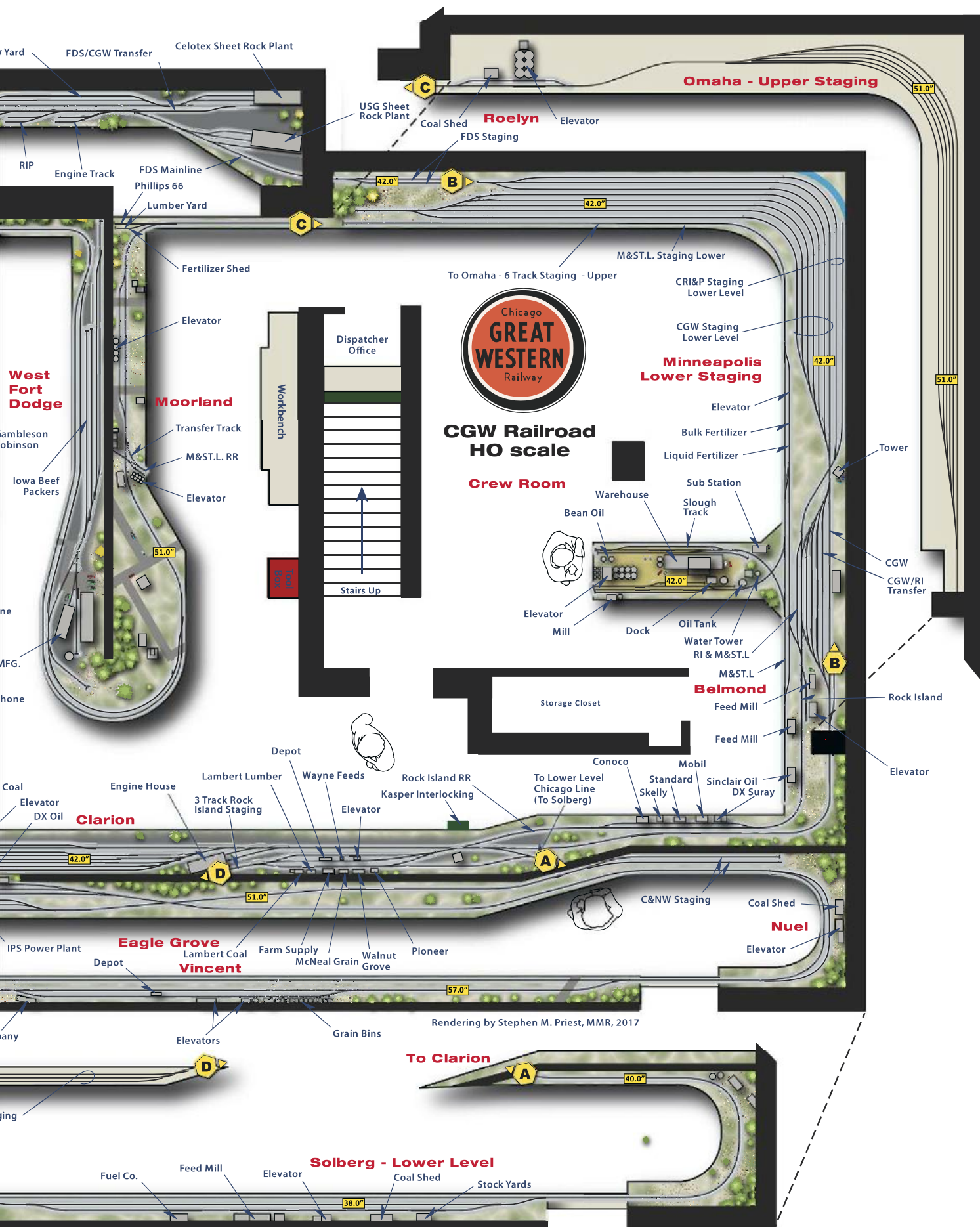
shakedown trains and some early test op sessions before the main track was complete.

When the main track reached the townsite of Nuel, it was decided to construct a 65-foot view block wall with a 10-foot wing wall to gain the towns of Eagle Grove and Florence, the Clarion Quarry, and the Division Point Yard of Clarion, plus another 150 feet more of mainline run-

Local Switching

A TR2 and its "calf" switch Horn Manufacturing. Horn makes manure spreaders and farm wagons. It regularly receives steel plate and structural shapes and ships finished farm equipment.





Rendering by Stephen M. Priest, MMR, 2017

ning. At Eagle Grove, we added the independent CN&W to serve the Boone Valley soybean plant and some business tracks. At Clarion, the CGW continues north side-by-side with the independent Rock Island Railroad to Belmond, Iowa, and on to Minneapolis. The RI continues to Estherville staging, which is located beside the CGW Minneapolis staging. At Belmond, there is a nine-foot peninsula hosting the independent Minneapolis & St. Louis Railroad, which serves another soybean plant.

As an afterthought, we constructed a line from Clarion east through the backdrop and descending to a lower level to Chicago staging with the two towns of Solberg and Coulter on the line; Solberg hosts a standard 30-car siding.

Back to Fort Dodge, heading west, we decided to build the 15-foot-long signature High Bridge. After we crossed the bridge, it was decided to build a 20-foot wing view-block wall, which added the towns of West Fort Dodge and Moorland. From there we ran into Roelyn and on to Omaha staging. Note: Omaha Staging is above the Minneapolis /Estherville staging.

The Fort Dodge industrial peninsula hosts the CGW with street running on a stub-ended line with the independent Fort Dodge-Des Moines & Southern railroad (FDS) running parallel in the mud. Both ran for about 23 feet until it was decided to add an additional seven feet, making the peninsula 30 feet long. This peninsula represents 12 blocks of the hometown that my wife Sue and I grew up in.

The front porch was suspended, and its original purpose was storage. With eagerness, the crew decided to encroach on that area, and another 52 feet of trackage was added for both the CGW and the FDS. The FDS has a larger presence with the addition of a five-track yard and eight industries.

Wiring

The majority of the bus wiring was installed before the table top was laid in place. I figured that the bus line wiring could be pulled in while standing up rather than later from a position underneath the layout. I used No. 12 solid copper for the bus lines. Every rail section is connected to the No. 12 wire bus line with No. 22 stranded wire. The drops were attached to the bus line with the 3M suitcase connectors. They are quick and have a good track record.

Much later, we installed a regulated 12-volt/5-volt DC centralized power supply (a repurposed computer power supply) to eliminate all the independent wall warts.

We also installed a fast clock system. These were strategically placed so that no one is ever out of sight of a clock.

Safety Features

We installed several battery-powered stand-by emergency lighting units. There are only two windows in the basement, and when we've had an outage, it gets inky dark.

We also framed in the free-standing view-block wall three egress openings that provide an escape path from the layout area to the rear exit door.

In addition, I had two custom-built magnetic lift-out bridges built and installed by Andover Tool Company Industries at the back door, which is the second entrance / exit for the basement for emergency purposes. That ground-level entrance also permits handicapped operators access to the layout, and it's been utilized on several occasions for that purpose. I had a third magnetic lift-out bridge installed at the entrance to the FDS main yard area, which also serves as my wife's storage room below the layout. These three bridges are secured in place with magnets,

and they lift straight out with one motion. The bridges are also wired to interrupt the approach track circuit when removed from the opening.

Table Top = Sheet Rock Central

My first big decision was to decide whether to use the traditional plywood for the table top or follow the lead of my friends from LaCrosse, Wisconsin, and use sheetrock, a.k.a. plaster board. The decision did not come without lots of controversy and raised eyebrows. In the past, I had attended operating sessions in LaCrosse, and I noticed that several of the layout owners used the



sheetrock as the table top. On the second trip to LaCrosse, I enlisted the advice of four gentlemen with construction, engineering, and attention-to-detail knowledge to check out the LaCrosse layout owners' use of sheetrock to ensure its integrity. At the end of the trip, the four gentlemen reported to me that they could not find fault with the sheetrock and went on to mention that the material did not expand nor contract with the changes in humidity.

I'll be the first to admit that cutting the sheetrock was messy, especially with a Roto Zip tool. However, the majority of the cuts were made by another gentleman and myself the days before

the normal work sessions, which kept the mess to a minimum.

The sheetrock received a coat of cheap paint and then was secured to the benchwork with adhesive caulk. We found that over the past 10 years, there has been no movement in the benchwork. It's the same principle as the walls of a residential or a commercial building structure. Since my initial decision to use the sheetrock, three other local layout owners have been convinced to follow the practice, and they are happy with the results.

Trackwork

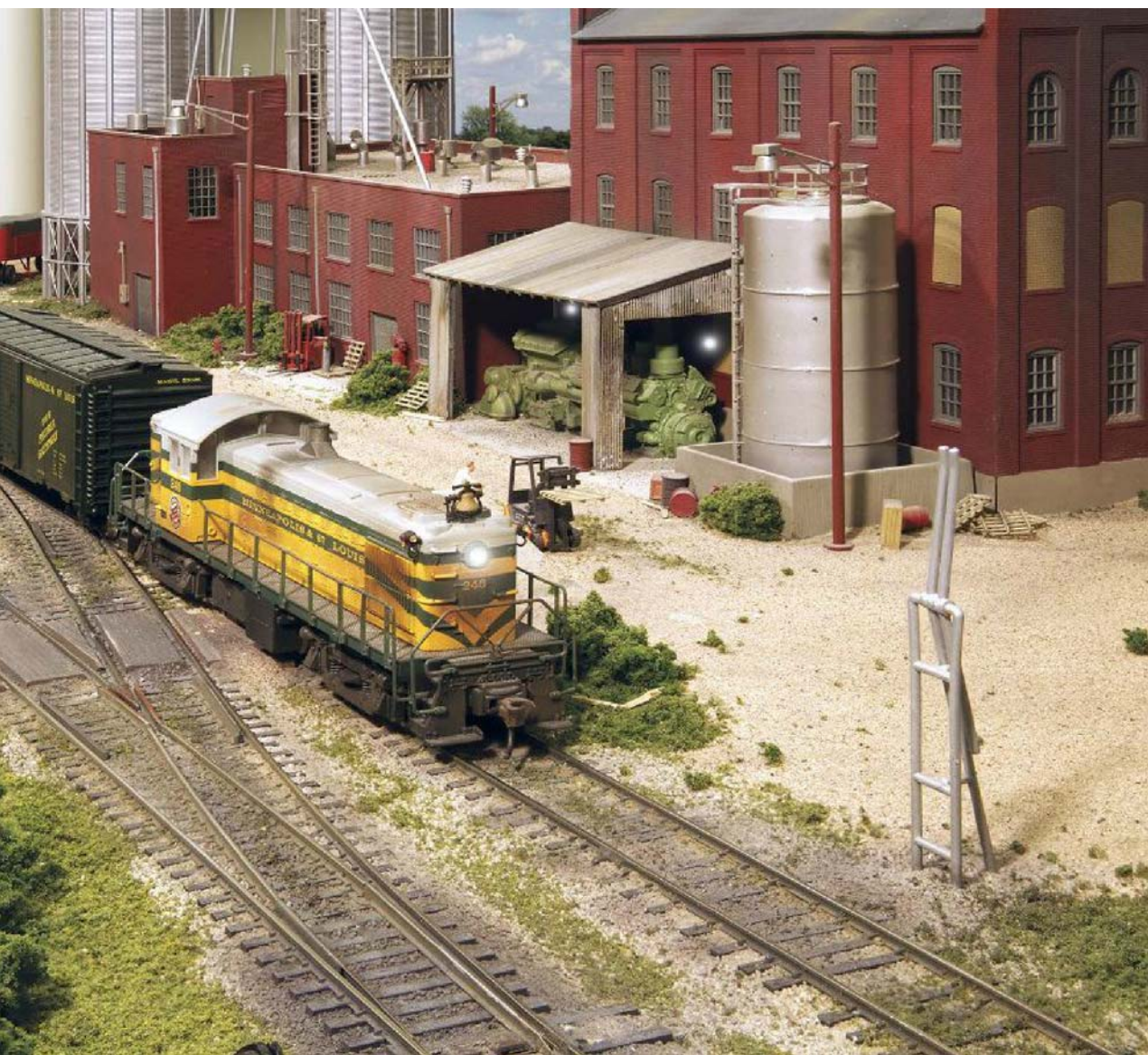
Cork roadbed was used for the main track, and it is secured

to the sheetrock with adhesive caulk. The Atlas Code 83 flex track is also secured to the cork with adhesive caulk. The passing sidings are installed on double-sided camper tape to establish a height differential. The business tracks are installed directly on the sheetrock with adhesive caulk.

We use the standard Atlas turnouts with Caboose Hobbies ground throws. There are four Tortoise switch machines and 12 Blue Point switch controls at hard-to-reach locations.

Control System

I use the EasyDCC system. To support the 350 feet of main track



Belmond Soybean Complex

RMC Editor Stephen Priest and his son Joel built this complex in seven days. It was the first scenicked area on the layout. It is still a favorite pick for operators because of its interesting track layout and the challenges of servicing the facility.

Clarion Tower

The Rock Island Local sits and waits its turn past the Clarion tower during an operating session. The three SD40s are brand new to the railroad and are in charge of a manifest train.



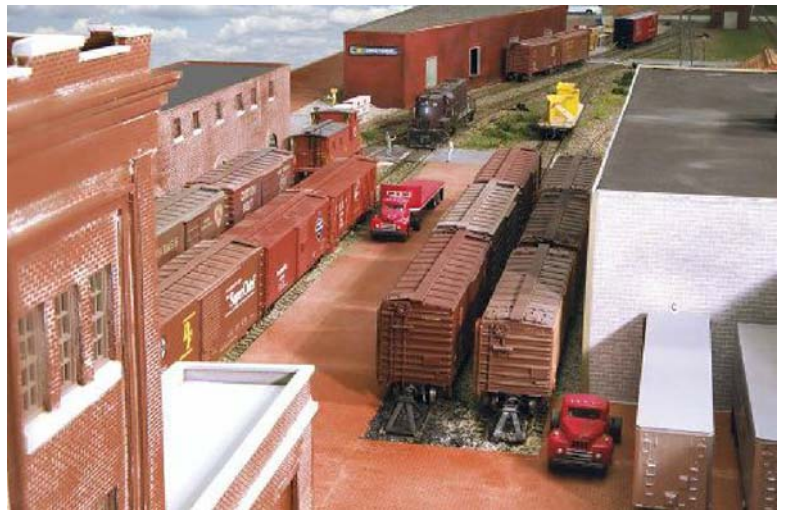
Ft. Dodge

The local crew is just about to pull and set cars from the CGW freighthouse. The large structure is scratchbuilt and took many hours to build. The Ft. Dodge local jobs are a favorite of the local crews.

and associated sidings and yards, we installed four single boosters and two dual boosters. The system has two radio receivers that support eight radio throttles. In addition, I installed two circuits of RG-6 cable to support eight tethered throttles. These throttles handle the frozen operating positions on the CGW and the FDS.

Crossing Signals, Gates, and a CTC Machine

At this time, there are five crossings at grade with the foreign roads. The crossing at Moorland with the M&St.L is an interlocking plant with operating lift gates controlled by a toggle switch. It is slated to be connected to the computer so that it operates at random. There is an automatic plant at Fort Dodge with the FDS, and it operates by photo cells. The plant at Eagle Grove with the C&NW is a poor man's interlocking operated by a rotary selector switch and an actuator button. The crossing at Clarion with the RI is operated by a small CTC machine. The plant controls the signals for the crossing, plus



it controls the powered junction track switch for the CGW. The machine is programmed to fleet the lineup for the RI side because of the numerous switching movements on both sides of the plant. This feature saves Rock Island operators having to continually press the actuator button as they switch out the cars on either side of the plant. The last plant at Belmond with the Rock Island again is presently a stop sign-controlled plant. A lift-type gate is being built to replace the stop signs.

Our signal maintainer is very

busy installing several highway crossing signal sets, one being a Griswold stop sign banner type. At a later date, we hope to install the flashing train order signals, which was a signature signal in the later CGW days.

Phone System

We have a push-to-talk, party line telephone system so that all the trains can report ("OS") their location as they progress or are delayed on the main tracks and the sidings. The system is driven by a genuine Western Elec-

tric power supply. The train dispatcher ("DS") has call buttons for each of the 14 station phone box locations. The system is wired up with a buzzer that sounds when a station is paged, and at the same time, a flashing LED is illuminated both at the remote station call box and on the DS call panel. Both of the LEDs continue to flash until the station operator picks up the handset. The DS call panel also has cancellation buttons so that he can cancel the call(s). The DS has a genuine Western Electric scissors telephone complete with a single headset. In addition, I installed a speaker box in case the headset becomes uncomfortable. The DS also has a foot switch for his telephone to keep his hands free to write on the train sheet.

Buildings and Structures

Since I'm more of a train operator than a model builder, all the structures on the railroad have been built by others. There is a mix of scratchbuilt, kitbuilt, and kitbashed structures decorating the entire layout. Most of the buildings have the flavor of prototype structures that were present in 1967.

One of the signature structures is the 15-foot bridge mimicking the one presently located at Fort Dodge, Iowa. The prototype bridge used by Union Pacific today is 103 years old, 140-feet high at the Des Moines River, and it is about 2,588 feet long. The model was built in a single piece by two local modelers. The main component was the box that was used as the base, and it was constructed of basswood from St. Albert's, Alberta, Canada. The bridge structure was partly scratchbuilt, and the balance of its parts are from Micro Engineering. I made several trips over this bridge in my youth on the signal maintainer's motor car and later as an engineman.

Another huge signature structure is the water tower located at

Fort Dodge. The prototype water tower was a 300,000-gallon capacity tank towering 250 feet high, 180 feet in diameter, and it served a population of 35,000. The model was shaped with a homemade vacuum form. The pattern for the curved top and the bottom of the tank was a 12-inch flat bottom frying pan with the handle removed. The legs were held in place during the construction of the model with a laser-cut template. It took 61 feet of wire to form the multi layers of cross connections.

The grain elevators are another grouping of interesting structures. All 15 of them reflect the general shape and size of the prototype. One of the modelers actually traveled to several of the country elevators and took photos and measured them.

Scenery

We use the Highball brand ballast for all our tracks. It's mixed in different combinations so that there is a color differential between the competing railroads. The basic ground scenery is made up of a combination of ceiling tile, plaster cloth, Woodland Scenics ground cover, Goop, Highball gravel, actual Iowa dirt, and Super Trees.

Rolling Stock and Motive Power

The rolling stock is a cornucopia of secondhand cars, scratchbuilt cars, kitbashed cars, and new cars. I also have some extended-vision wooden cabooses that were unique to the CGW; they were built from kits that I developed in association with American Model Builders.

The road motors are mostly older Stewart units equipped with sound and working Mars lights. The roster also has a sprinkling of Proto, Athearn, Kato, Broadway, Atlas, Bowser, InterMountain, and Bachmann units. Some of them are equipped with sound and lighting.

Special Features

At seven locations, there are repurposed slide-out keyboard trays serving as desks for the footboard yardmasters and the switch crews. Under the porch area, we built a long counter to serve as a desktop for both the FDS and the CGW. At other locations, there are clipboards to hold switch lists.

At all six transfer track locations, double waybill boxes represent each road and those boxes are color-coordinated to represent the individual road, i.e., CGW = a maroon box, FDS = a yellow box, M & St .L = a blue box, CNW = a green box, and RI = a red box.

My wife hung black curtains around most of the benchwork.

Recently, we installed 25 drink holders on the layout fascia, which keep the stains on the layout to a minimum.

Waybills, Train Packets, and Switch Lists

My two-sided waybills are set up in the simplest format to make it understandable for any one-time visitor. On the prototype, at the onset of a run, most conductors and brakemen want to know where the cars in their train are scheduled to be set out and what towns require a pickup that trip — nothing more, nothing less. The movement on my CGW is toward one of the three staging areas (Omaha, Chicago, or Minneapolis) or to a specific industry spot at a given townsite. I've never been a computer person; therefore, I do not have the patience to spend time on a computer directing cars to offline destinations. I leave it up to the staging genie to route the cars from staging to Timbuktu. I oversimplified the waybills to display the simplest form of movement. If operators want to know where the car is heading in the real world, he/she can ask the phantom yardmaster at one of the staging yards. I do

not read anything other than the route at other layouts, and I do not expect anyone to read other than the basic route on the CGW.

Since some of my trains move drag (through) cars across the system, I've combined those car cards onto a consolidated multi-bill. The single card represents a number of cars billed by the clerk to the far terminal. In a train packet representing a 30-car train, this form saves a lot of space in the packets.

All my train packets are transparent. The first card in the packet has the train number and a destination that can be read through the front of the packet. In addition, there is a brief explanation of the train's duties. The

last card in the packet is reversed and readable through the back of the packet. It is the engine card, which contains the numbers of the motors and a DCC acquire number.

I have plenty of blank switch lists for any operator inclined to use them. One operator called them an inventory list. I call them another tool to aid in the fun. I also have preprinted shove lists similar to switch lists that contain a car line up for spotting on tracks with facing point movements only.

Operation Philosophy

Everyone in the model railroad hobby comes from a different perspective. Some received an Amer-

ican Flyer or a Lionel train when they were young, some lived near a railroad, some had a neighbor who had a train set up in his / her basement or attic, some have a member of their family who worked for the railroad, some rode a train at some point in their lives, and a few actually worked for the railroad. From my seat on the locomotive, peering out the front window keeping a watchful set of eyes focused on the right-of-way ahead of the locomotive and watching for the signals and potential obstructions brought me to a narrow modeling focus. I did not study the individual freight cars trailing behind me. So the knowledge of what types of cars I moved across the many divisions was foreign to me; I didn't care — unless it affected the safety of the movement. Therefore, I cheated myself out of the opportunity of knowing the different types of cars beyond the basic boxcar, hopper car, and flatcar. My focus was on moving a train from Terminal A to Terminal B. When I worked the switch engines, I got a closer look at the different cars, but even that exposure was from the seat on which I was perched. So, my passion for model railroading is moving groups of cars from one place to another, be it a staging track at the other end of a layout or spotting a car at a certain industry.

The CGW model railroad is operated with the flavor of the prototype, but in my case, modeling the sleepy west end of the system, I've increased the volume of the traffic of the prototype by 433 percent for operational fun value. If I were to operate only the number of trains mimicking the prototype, the OP session would probably last 90 minutes in real time.

The main line is a 350-foot single point-to-point non-signalized route with six 30-car length sidings for meeting 30-car trains. We currently operate with 18 operators, covering a dispatcher's job,

Meet At Florence

A brace of motors take the siding at Florence to meet the time freight. CGW was well-known for its large fleet of EMD F-Units ("covered wagons"). The railroad rostered these units in several interesting paint schemes, two of which are shown in this image.





three footboard yardmasters, four frozen switch jobs, three road locals, two passenger trains, a few miscellaneous trains, and numerous time freights.

The dispatcher has a desk and a train sheet and controls the traffic with the "Mother May I" system. He orchestrates about 22 trains in a three-hour operation session.

Conclusion

Since I lived with a rule book for 43 years, there are very few rules on this CGW. Rule No. 1: have fun! I'm told that we are men playing with plastic. I'm also told we are imaginengineers. Another one of my friends told me that we are attempting to buy back our youth.

We have a medium-sized group who meets for lunch every Tuesday, and then we work on the layout, transforming it from

the Sheet Rock Central to a very pleasing scenicked model railroad. There is a scenery crew, a backdrop crew, a ballast crew, a buildings crew, a signal crew, a forester, a car shop crew, and the Go-Fer. Some Tuesdays, we solve the world's problems. Other Tuesdays, we BS, and most weeks we complete another increment of scenery and/or construction. I find that model railroading is fun from many perspectives. And remember; "It takes a village to build a large model railroad!"

Belmond Soybean plant Complex

Eight days before a major operating event here in Kansas City, our work crew sent a 4x8-foot wooden framework topped with sheet rock out the door with Stephen Priest, editor of RMC. His task was to design and build a soybean complex complete with

trackage — someday.

Seven days later, Stephen and his son Joel knocked on our door and delivered a fully scenicked and operating soybean plant ready to run. No one on the planet could believe this took place in seven days. They had built all the structures, laid and wired the trackwork, and detailed and weathered the scene. Stephen later commented with a bit of frustration that the big holdup was waiting for Walthers to deliver the structures and detail parts so that they could begin working on the facility! I asked two gentlemen to hook up the tracks to the main layout, and on the eighth day, we operated the Belmond Central Soya soybean plant during the KC operating event.

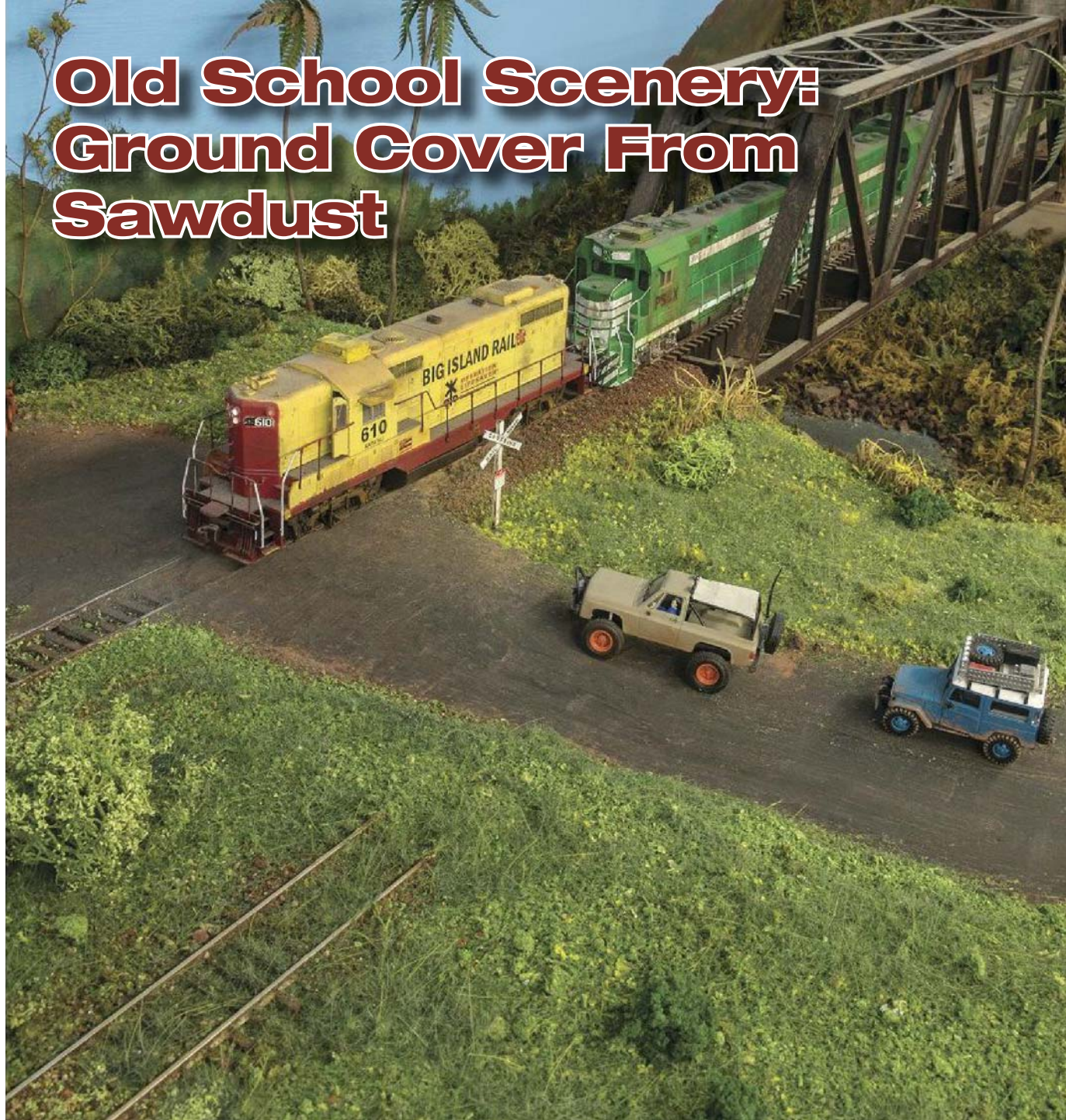
"No kiddin'; this really happened!" and I've got many witnesses to this fact! **RMC**

Ft. Dodge

The heart of Ft. Dodge was served by two railroads: Chicago Great Western and Ft. Dodge, Des Moines & Southern. The CGW is seen switching industries on the left side of the image while the Ft.DDM&S is pulling cars with two of its GE 44-tonners. Incidentally, prior to the little GEs, the Ft.DDM&S used boxcars under cantenary to do its work. The prototype is 12 blocks long and the model is 36-foot long.

Old School Scenery: Ground Cover From Sawdust

GROUND COVER FROM SAWDUST



CRAFTSMAN Joseph Kreiss, photos by the author

Colorful Scenery

Joseph combines the colored sawdust with other commercially available scenery products to produce a realistic grassy meadow on his HO-scale Big Island Rail Corp. layout.

We live in a high-tech model railroading world these days. There is 3-D printing, laser-cut kits, and even affordable laser-cutting machines available for home hobby use. We have DCC, sound-equipped locomotives and accessories, plus modelers can now control movements of their trains with a smartphone!

The hobby has certainly come

a long, long way from when I started model railroading as a teenager in the “blue box” era. It has exploded with products and modeling methods that, up to just a few years ago, never existed. One area of the hobby that has seen tremendous advancements in the past few years is scenery products. We don’t just have generic trees; we can purchase al-





Supplies

Before starting, Joseph gathers the supplies needed to color sawdust for scenery ground cover.

most every species of trees that grows on the planet. Add to that static grass, ground foam, scale tree leaves, sunflowers, cattails, and corn stalks. If we want it for our layouts, it's likely someone offers it commercially for sale.

To model realistic scenery for our layouts, it's not as much the individual plants or trees as it is the sum of the whole. Convincing scenery is made from a combination of materials and textures. I like combining some of the modern stuff with old school scenery methods I grew up using. One of those throwback scenery materials is colored sawdust.

Model railroaders are a resourceful lot, especially those of us on a tight modeling budget. Modern-day scenery products can be pricey. And, if there's a lot of bare plaster to cover between the tracks, the cost of doing scenery on a layout can get expensive very fast.

I find it challenging and extremely rewarding to take a totally unrelated material or object and transform it into a usable item for the layout. My wife Kim and I are in the process of restoring our 90-year-old bungalow. A by-product of those construction and woodworking projects is sawdust — lots of sawdust! And as silly as it may sound, I have a hard time sweeping the garage floor of sawdust and just dumping it into the trash can. I've been saving this bio-mass for months for eventual use on my two layouts. (I also wash my disposable plastic flatware, but that's another story.)

Many of the "old hats" of the hobby remember using fabric dyes, such as RIT, and making a huge mess mixing and staining tubs of sawdust to represent grass or dirt for our 4x8-foot plywood pikes. The dye was a pain to mix. It would stain hands, clothes, or carpet and get us into trouble with our spouses. As I recall, it never did look all that convincing. Maybe the color of the dye wasn't right. But with new, non-toxic and

Non-Toxic Paint

Joseph uses non-toxic craft paints to color the sawdust, mixing a variety of green shades for grass.



Thinning

Using a mix ratio of three parts rubbing alcohol to one part water helps the sawdust dry faster after mixing. Pre-mix the thinned paint mixture before adding the sawdust.



Adding the Dust

Slowly stir the sawdust into the paint mixture, adding more rubbing alcohol or sawdust until the sawdust is well-soaked and evenly coated with the color.

Scenery Batter

The sawdust should absorb all the thinned color wash, have a nice, even color and not be dripping.

Finished

The colored sawdust should have the consistency of damp sand when done correctly. Dump the sawdust onto several layers of newspaper after mixing.

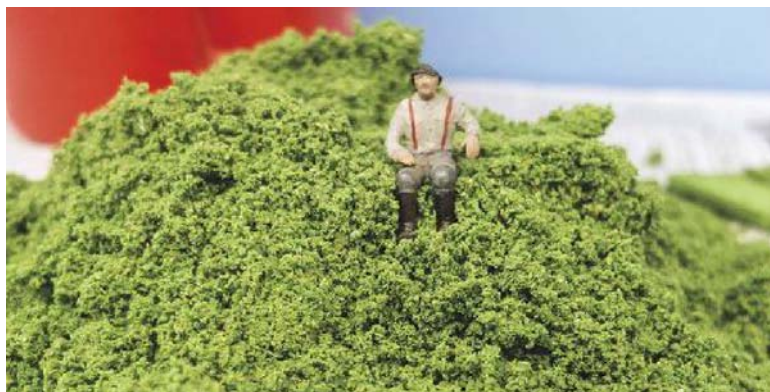
much “neater” staining methods on the market today, colored sawdust, when used with other scenery products, is a very useful tool in any model railroader’s scenery arsenal.

Gathering the Materials

I’ve found that MDF (medium density fiberboard), available at most well-stocked lumber yards and home improvement centers, produces the best, most uniform sawdust. It normally comes in 4x8-foot sheets of varying thickness and is used for making cabinets, furniture, and other construction projects. Plywood or Douglas fir dimensional lumber tends to make a coarser sawdust, flecked with larger wood chips that don’t look good as part of the finished ground cover. Hardwoods, such as walnut or oak, do not absorb the stains as readily as the soft woods do.

A good time to start collecting sawdust is during the benchwork and layout room construction phase. If it’s too late for that, drop by your local lumber yard, cabinet maker, or home improvement store and ask if they have any waste sawdust you can have. It’s a good idea to go prepared with containers in which to carry the sawdust home.

Before dropping the sawdust into the paint, take a quick look at the sawdust and remove any foreign objects such as rocks, carpet strands, pet fur, lawn clippings, or any large slivers of wood that may have been swept up from your latest project. If you have a woodworking shop with saws and sanders that have a sawdust collection system, the wood waste will likely be free of unwanted materials. I still like to go over the sawdust and remove any out-of-scale pieces. I also sift the sawdust using window screen or a kitchen strainer to catch larger chunks and create a finer grade of sawdust for special uses like tree or bush foliage.





Once I have a good amount of sawdust ready, I gather a selection of various green, yellow, and brown water-based acrylic craft paints, the ones at the local craft store or retailers like Wal-Mart. I also have a small bottle of 50 percent isopropyl rubbing alcohol, some tap water, a few large, clean coffee cans with lids, a stir stick, and a few paint brushes close at hand.

I begin by squirting two or three different natural-looking shades of green and maybe some yellow or tan craft paint into a large coffee can used as a mixing and storage vessel. The ratio of colors depends on the shade I want for the ground cover. I'll use lighter green-yellow paints for new growth, darker green paints for old grown, or even tans and brown paint to represent dry and dying grass. There really isn't any right or wrong color mix as long as the color looks natural.

I add a good splash of the rubbing alcohol and water to the paint. I try to have roughly a three-parts alcohol to one-part water ratio. Using more alcohol than water helps moisture in the paint evaporate faster, helping the sawdust to dry. I use a medium-sized paintbrush to mix the paint and liquids together and add

more paint if I want to adjust the color. I try to achieve a strong color wash consistency in the paint, adding more alcohol as needed. The key is to have plenty of color to tint the sawdust completely yet have the mixture thin enough to easily soak into the sawdust.

Making Sawdust Ground Cover

This is where the fun begins. When I'm happy with the color and the consistency of my color wash, I slowly pour the sawdust into the paint mixture using a stir stick to help coat all the sawdust with the color. Continue to add sawdust and stir until the color wash completely coats the sawdust and the liquid in the mixing container has been absorbed. If the sawdust looks too dry, add a splash of rubbing alcohol to the container and continue to stir. If the sawdust looks too wet, add a little more sawdust and stir it in. The colored sawdust should have the consistency of damp sand.

Once the sawdust is completely mixed and colored, I dump the batch onto several layers of newspaper. Using the stir stick, I spread the damp sawdust over the newspaper into a thin, even layer. I let the sawdust dry overnight in the train room or other warm spot.

Adding Leaves to Trees

The same method is used to add leaves to miniature trees using the finer-grade sifted sawdust. The sawdust can be oversprayed with hair-spray after the spray adhesive dries. This secures the bond of the sawdust to the tree. Various shades can be added to the tree to simulate the sun and shade sides of the tree.



Drying

Using the stir stick, spread the damp sawdust out on newspaper into a thin layer. This will help the sawdust dry faster and prevent clumps.



Sifting

Once the sawdust is completely dry, sift to produce a finer grade of sawdust ground cover if desired and remove any larger or out-of-scale looking pieces of wood from the batch.



Graded

Sifting the sawdust produces a finer grade of the ground cover, which is good for representing leaves or foliage on modeled trees or bushes.



Adhesive

Using a craft store spray adhesive, the author lightly sprays the tops of lichen clumps before adding colored sawdust "leaves."



Adding Leaves

The sprayed lichen clump can be dipped into the colored sawdust, or the sawdust can be sprinkled onto the spray adhesive for a lighter coating.

Adhesive

The author paints a thick layer of matte medium to his layout's scenery base as an adhesive for the colored sawdust ground cover.



Adding Foliage

The sawdust ground cover is liberally sprinkled over the wet matte medium.



Wet Water

The author sprays wet water onto the sawdust to thoroughly soak it and help wick the matte medium into the ground cover.



I'll give the sawdust an occasional stir to keep the material from drying in clumps or sticking together. When completely dried, I transfer the newly tinted sawdust into the plastic mixing container and snap on a lid until ready for use on the

layout. It's also a good idea to label the sawdust container, so the color needed can be easily found.

Adhering the Scenery Material

I apply the sawdust on the

layout using a couple of different techniques. If the area I am working on is bare white plaster, I'll coat the plaster with a thick coat of dirt-colored acrylic paint. While the paint is still wet, I'll sprinkle the colored sawdust over the paint, which acts as the adhesive. If the area has already been painted or a base coat of dirt or grass is in place, I will brush on a coat of matte medium, such as Mod Podge. Other commercially available scenery cements can be used as well. I sprinkle the sawdust over the matte medium then apply "wet water" (tap water with a drop or two of dish detergent added to break the surface tension of the water) using a spray bottle until the sawdust is very wet. This helps the matte medium or paint base coat to wick up into the sawdust to help it adhere. I will also drizzle on diluted white glue in thicker areas to make it stay in place when dry. I might repeat these steps several times to layer the sawdust until the new ground cover looks thick and lush.

I can also use the colored sawdust to add patches of sawdust grass in fields, along roadways, railroad tracks, and creeks, or along the bottom of a structure's foundation. I carefully sprinkle the sawdust in these areas, moving it into taller mounds or patches with a dry paintbrush. Once that's done, I'll gently spray the sawdust with wet water, and then go back in with the diluted white glue mixture, carefully applying it on the dampened sawdust with a squeeze bottle or pipette. A palette knife or small spatula can be used to maneuver the wet sawdust into place.

A Mix of Old and New

I combine the old school sawdust with the modern static grass to add layers and texture with great results. Once the base layers of colored sawdust are glued in place and dry, I once again apply a coat of matte medium in the spots I want the static grass, push

in the applicator's ground pin into the scenery, and apply the static grass where desired.

Other types of commercially available bushes, weeds, and trees are added to complete the scene. I like the results of combining several different shades of colored sawdust to an area with commercially available scenery and ground cover products and natural materials I find around the yard. The various layers of textures and colors really add to the realism of the modeled scenery.

Another use for the colored sawdust ground cover is to add leaves to model trees. I find the sawdust is more coarse and irregular and looks more like scale leaves than ground foam. By being able to custom blend colors for the sawdust, any season can



be represented, from spring to fall. I stretch poly foam over the tree branches, lightly coat with a spray adhesive, sprinkle with darker-colored sawdust first, and then spray again with glue, topping the tree with lighter colors to give depth and dimension to the foliage. I use this same technique for smaller bushes, using lichen or stretched polyfiber sprayed with glue and dusted with the colored sawdust. By having smaller

amounts of red-, purple-, and yellow-colored sawdust on hand, a sprinkling these colors on the completed bushes gives the impression of blooming flowers.

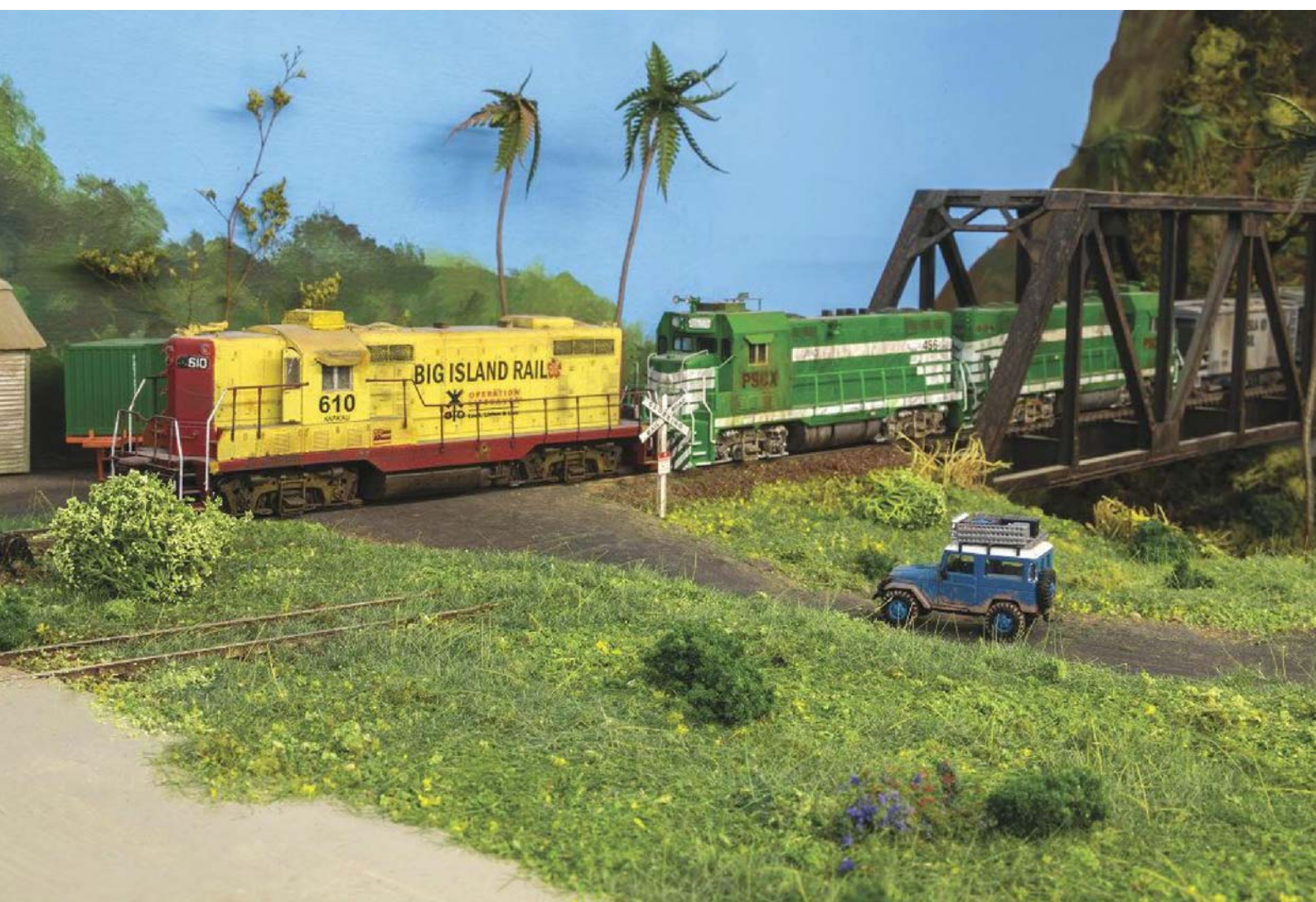
I recommend you go "old school" and give this tried-and-true scenery method another look. The cost is minimal, the results good, and I think you'll agree that using this throwback colored sawdust still has a place on today's layouts. **RMC**

Detail

The amount of detail that is attainable in a scene is apparent. The sawdust is cheap and easy to work with.

Completed Scene

The finished scene looks great. Notice the addition of the static grass.



**SBD 45607**

Above: A close inspection will show the rotary slack adjuster hanging below the side under the car number. This shot was taken at Hamlet, North Carolina, on May 14, 1983. — Paul Faulk photo

GSI 45' Pulpwood Flat

CRAFTSMAN/James Kinkaid

In the August 2015 issue of *RAILROAD MODEL CRAFTSMAN*, we took a look at General Steel Industries's (GSI) 50-ton capacity 38-foot inside length cast-steel pulp-

wood car. Even as those cars were being produced, some railroads requested higher-capacity cars. In early 1956, the Frisco took delivery of the first GSI car rated at 70-tons capacity. While the 38-foot cars were nominally rated at 22 cords, even with 14-inch end extensions, the cars managed to carry only about 25 cords of wood. The newer cars were not only longer (at 45-feet, 0-inches inside length) but could carry approximately 31 cords of wood and are the subject of this month's drawings and article.

As mentioned in the prior article, GSI supplied kits for the smaller cars. In fact, all the known 38-foot cars were built by the owning roads with General Steel simply supplying the raw castings for the owners to finish at their shops.

ACL 111764

There are a number of subtle differences in this car and the one presented in this month's drawings. One bigger change was with the location of the brake retaining valve. The shot was taken at Woodland, Georgia, on April 14, 1965. — Larry Goolsby photo

Although this held true for some of the early orders of the 45-foot cars, GSI began to furnish completed cars by 1963. This 1963 order was built at the Eddystone, Pennsylvania, shops. After that, it would appear that all production took place at GSI's Granite City, Illinois, shops. (The cars not confirmed as being built at Granite City were likely to have been built there too.) To this must be added the set of cars built by American Car & Foundry for Atlantic Coast Line in early 1957. ACF expert Ed Hawkins notes that this was a most unusual occurrence; it may be that ACL's Waycross Shops was simply too busy with other projects.

The 45-foot cars resembled the earlier 38-foot ones in several respects. For example, the canted deck continued to drop the same amount (about seven inches) to make the "V" in the deck profile. And the side sill depth remained the same at 24 inches at the center of the car. As can be seen, the end bulkheads were higher, and I suspect that these were the same bulkhead castings as used on the





regular bulkhead flats (as used for wallboard service, for example). The car's overall width remained the same at 8-feet, 8-inches.

That said, there were some changes made. Besides the obvious length and height differences, the main castings themselves were somewhat different. For example, the 45-foot car's "center sill" (I use quotation marks here since the car did not really have true center sills, but rather cast this function into the main casting) lower flanges turn inward on them versus outward on the smaller one. In addition, the 45-foot car "cross bearers" (again, in quotation marks

since these were also integral to the main casting) met the side sills about midway up, instead of at the bottom of the sills. A comparison with the August drawing detail "C" and this month's "view A-A" should explain this much better.

Some differences

Norfolk & Western assembled its 25 cars with rather unusual decks. These cars had humps pressed into them, apparently in an effort to stiffen the floor sheets. I have provided two detail drawings to show the deck sheet design. In addition, the outer end bulkheads had special brackets welded to

their sides. Located between the side grabs, they apparently were installed to keep the loaders from knocking off the grabs. I've also provided an additional two detail views of the N&W ends to illustrate their layout and placement.

The post-merger order to the SCL proper deserves mention. A look at SCL's 110389 shows several differences between this order and the others. For starters, an obvious change would be those end bulkheads. The change may have been made to save on raw material costs. More subtle is the fact that the side sill out-
(text continues on page 71)

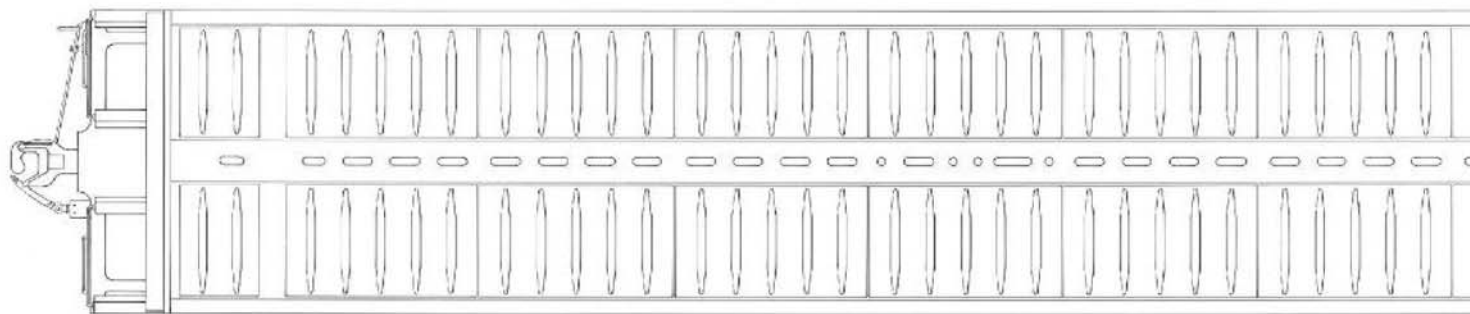
N&W 2975

A builder's photo taken on December 1, 1961, presumably at Princeton, Virginia, where the car was assembled. The anti-fouling brackets are placed between the bulkhead side grabs.

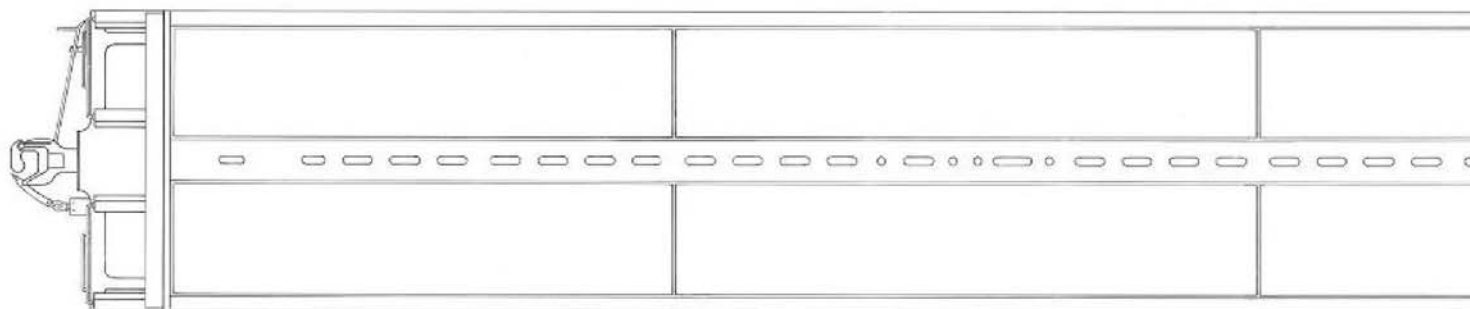
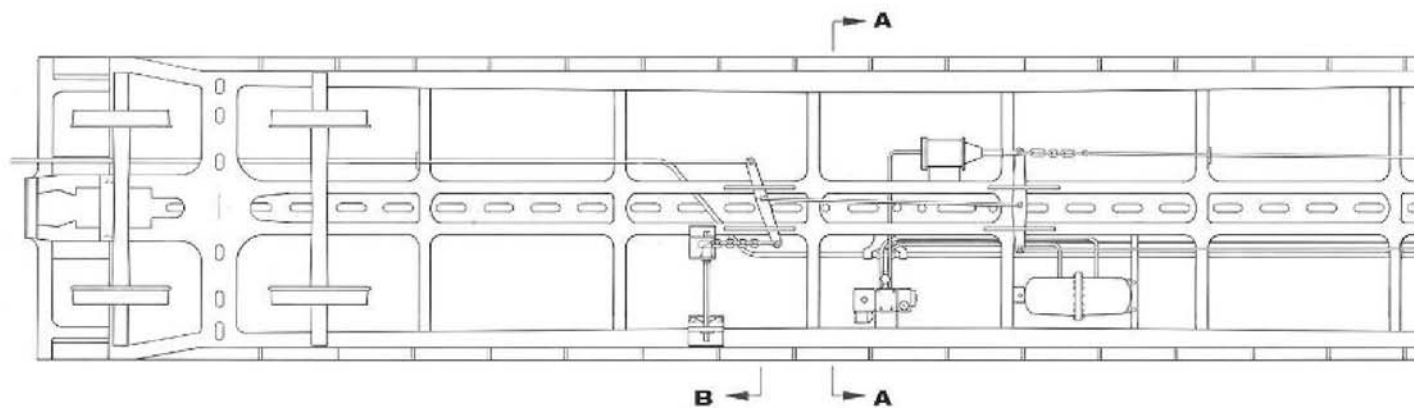


MP 9381

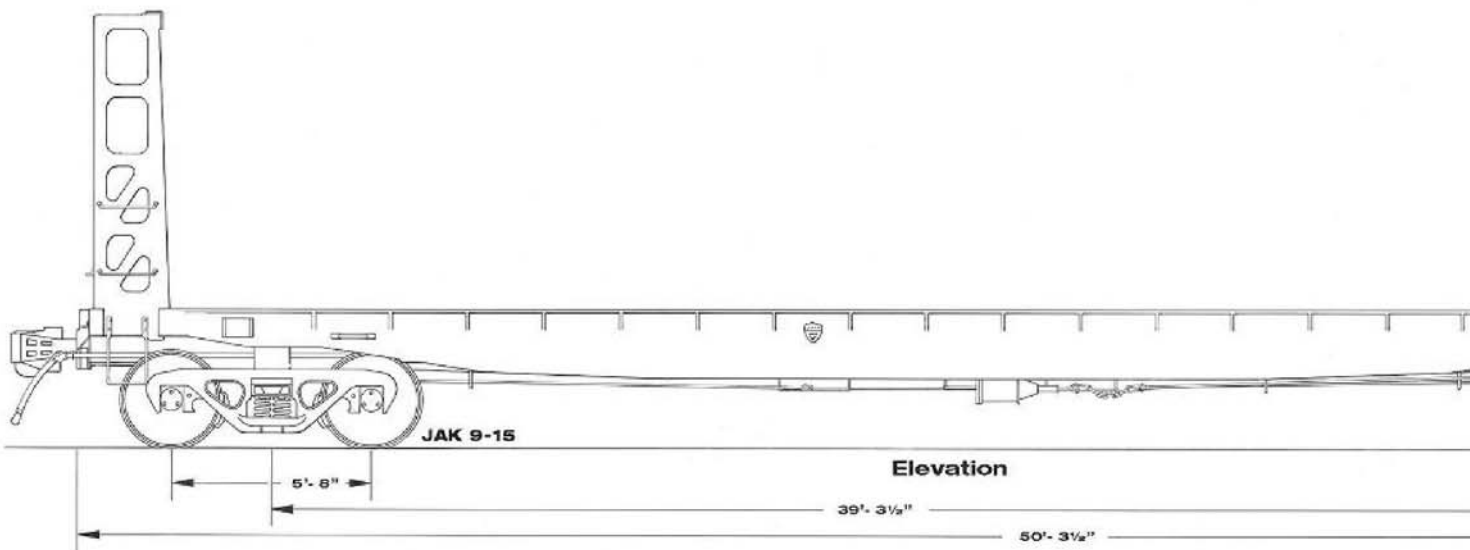
Missouri Pacific took this picture at its DeSoto (Missouri) shops in November, 1957, when the car was constructed there. — Ed Hawkins collection



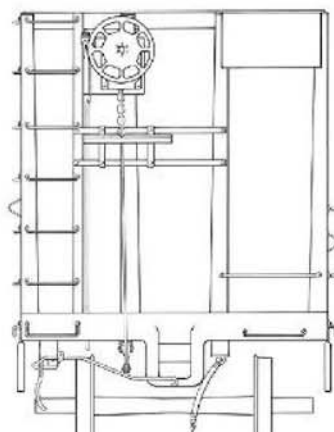
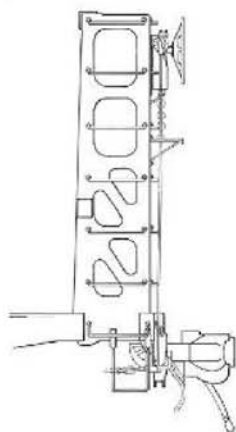
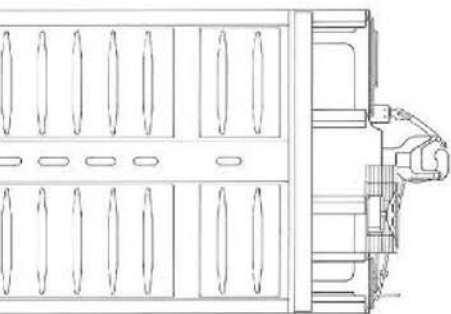
Norfolk & Western Plan



Plan



Elevation

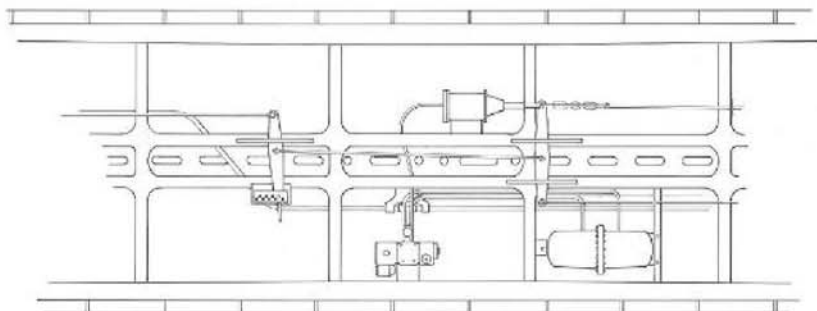
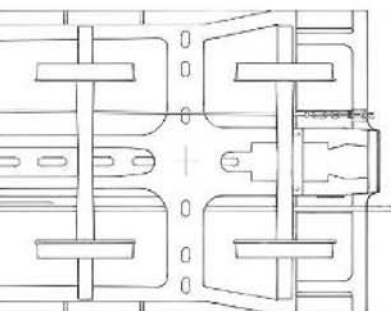


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 S Scale

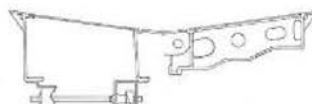
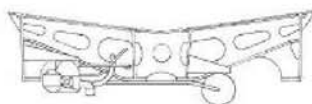
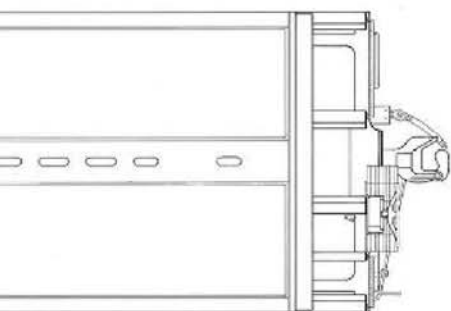


Norfolk & Western B End

N&W Floor Sheet



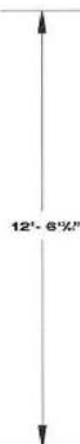
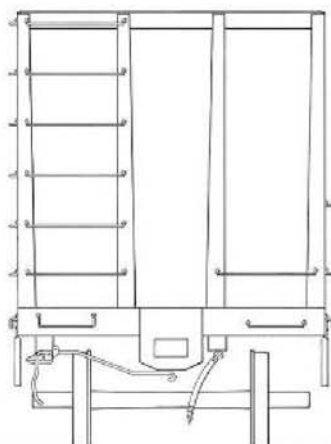
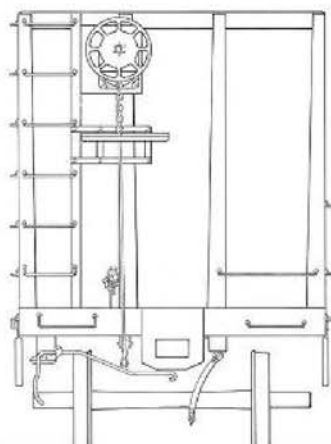
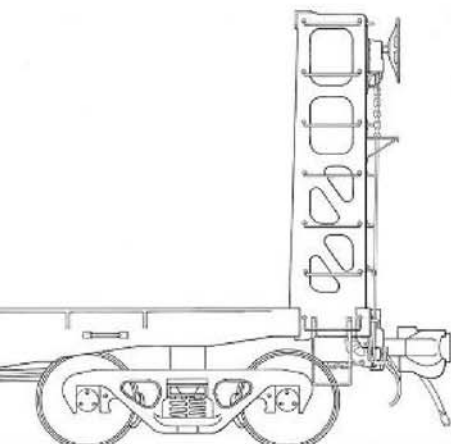
Early ACL Brake Layout With Manual Slack Adjuster



View A-A

View B

Bolster



12'-6 1/2"

A End

B End

B - End



Above: In this image of SCL 110389, taken at Woodland, Georgia, on February 13, 1971, we can see the subtle changes in the side sill architecture mentioned in the text. The bulkhead design change is much more obvious. — Larry Goolsby photo

Below: In a rather unusual move, the ACL had American Car & Foundry assemble one lot of pulpwood cars at the St. Louis plant in 1953. This may have been due to the road's Waycross shops being too busy to build the cars. — ACF photo, Ed Hawkins collection





ACL 111034

A publicity photo taken at the station at Waycross, Georgia, in June 1966. — ACL photo, courtesy Paul Faulk

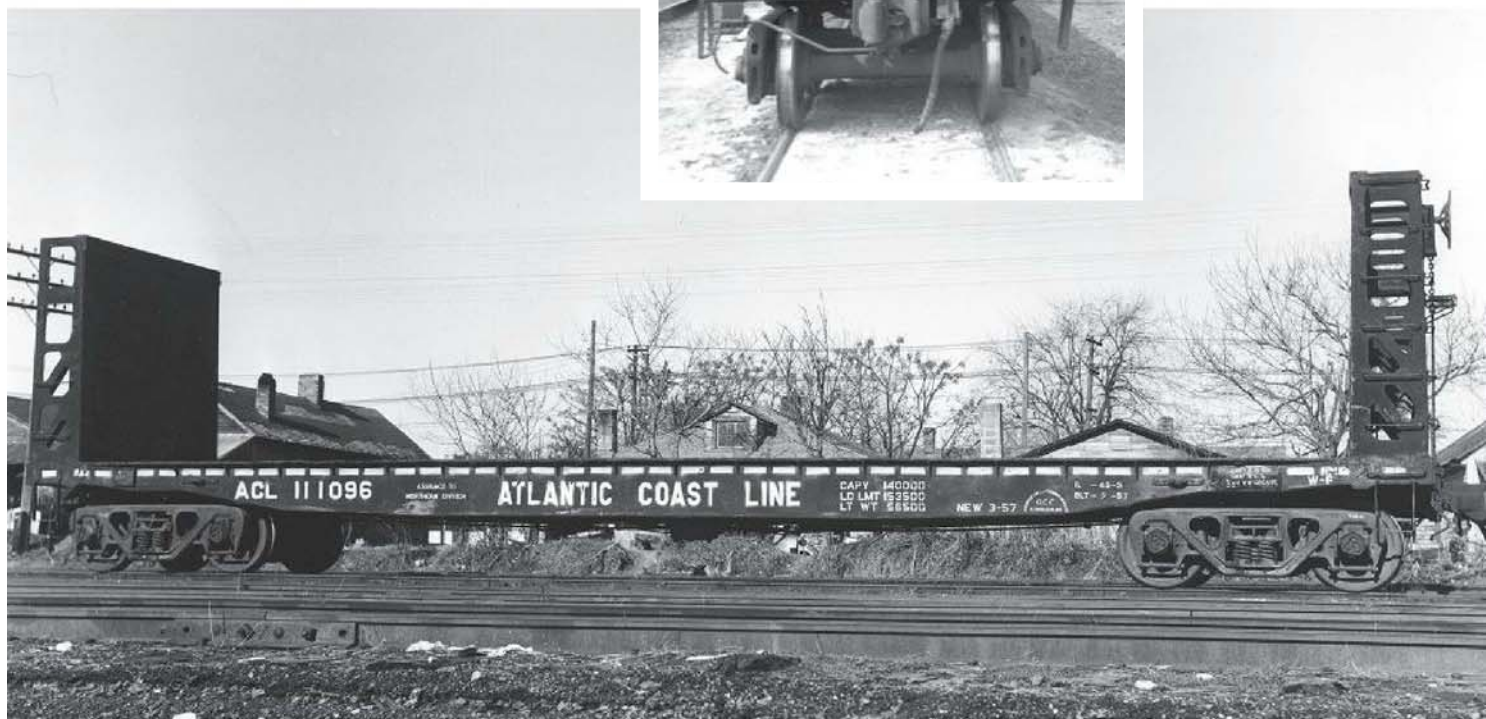
ACL 111034

The "A" end was a little different than the "B" end, primarily due to the lack of the extra upright bracket for the grabs, platform, and brake housing. Shown in Rebecca, Georgia, in March 1962. — Larry Goolsby photo



ACL 111096

A two-year-old car at Fayetteville, North Carolina, on March 9, 1959. — Col. Chet McCoid photo, courtesy Bob's Photo



General Steel Industries 50-ton Pulpwood Car

ROAD	NUMBER SERIES	BUILT	BUILT By	NOTES
ACL	110900-111699	2 to 5-57	ACF St. Louis lot 01-4861	W-6, to SCL 410900-411699, to SBD/CSXT 402154-402933
ACL	111700-111899	2 to 6-65	GSI	W-6, to SCL 411700-411899, to SBD/CSXT 402934-403133
ACL	111900-111913	7-65?	GSI	W-6, to SCL 411900-411913, to SBD/CSXT 403134-403147
ACL	111914-112113	12-65 to 4-66	GSI Granite City	W-6, to SCL 411914-412113, to SBD/CSXT 403134-403147, different underframe casting
ACL	112114-112413	11-66 to 4-67	GSI Granite City	W-6, to SCL 411914-412113, to SBD/CSXT 403134-403147, different underframe casting
CCR	3010-3015	12-70?	GSI	
CIRR	4000-4011	7-70?	GSI	
MP	9200-9399	11-57	MP DeSoto	to MP 731000-731197, ends extended
N&W	2975-2999	12-61	N&W Princeton	F-7
SAL	45600-45649	2-63		WS-6, to SCL 845600-845649, to SBD/CSXT 403648-403697
SCL	110000-110499	5 to 12-70	GSI Granite City	LP-1, to SBD/CSXT 401660-402153
SLSF	5300-5449	4-56?	SLSF	to BN 610800-611048, to BNSF 575061-575068
SLSF	5450-5549	11-57	SLSF	to BN 610800-611048, to BNSF 575061-575068
SSW	88800-88849	7 to 8-57	SSW	
SSW	88850-88899	6 to 7-58	SSW	
T&NO	9250-9299	1958	T&NO New Orleans	P-70-1, to SP 702000-702049



ACL 111764

A nicely painted car found at Woodland, Georgia, on April 14, 1965. — Larry Goolsby photo



(continued from page 65)

line changed above the trucks. A guess would be that this was introduced for wheel clearance issues, although why so late in the overall production run remains a mystery. And finally, I can see no evidence of support brackets for the overhanging lip of the deck along the car sides. These cars were so different from the mainstream orders for the cast pulpwood cars that I've only included them in the roster in the interest of completeness.

The Drawings

The drawings this month are based on Seaboard Air Line's order built at Eddystone in early 1963. I had blueprints available for these cars, the ACF order built for ACL in mid-1957, and also N&W's order. All the main castings were very much alike, although they all differed somewhat with respect to the strikers. As can be seen, the SAL cars placed their retainer valves down low, but it would appear that most other orders placed them up near the handbrake. And speaking of handbrakes, these cars were sup-

plied with Klasing's Model 1150. SAL also included a Universal brand rotary slack adjuster on the cars. Surprisingly, the ACL cars stuck with manual slack adjusters (similar to the one seen in the August drawing, and for which I've provided a detailed drawing this month) all the way up until automatic adjusters were applied to the last ACL order in late 1966 and into 1967.

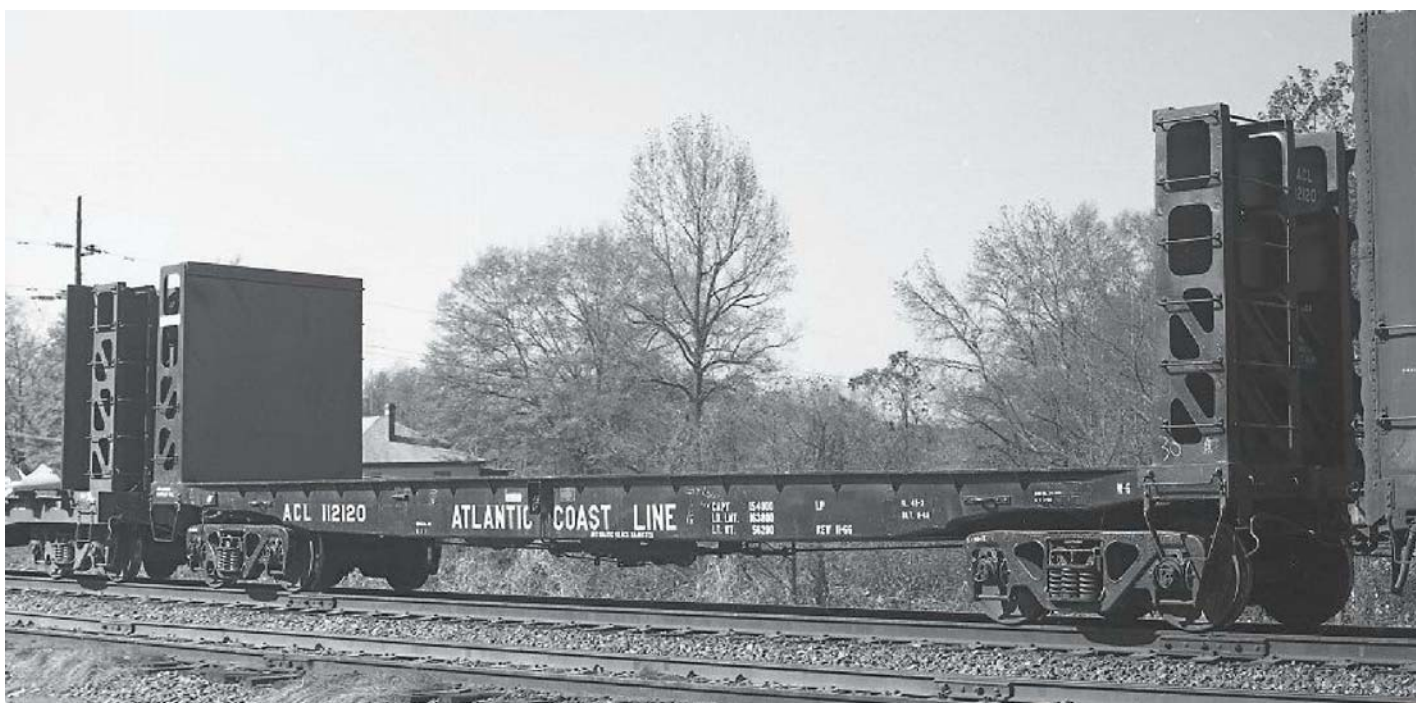
Many thanks to Paul Faulk and Larry Goolsby for their assistance. And also thanks to the N&W Historical Society for making their car's blueprints available. [RMC](#)

ACL 111445

Loading underway at an unrecorded location/date. — Larry Goolsby photo

ACL 112120

A scene at Manchester, Georgia, taken in 1966. Note the captive bearing trucks, fondly used by ACL. — Larry Goolsby photo





ACL 11955

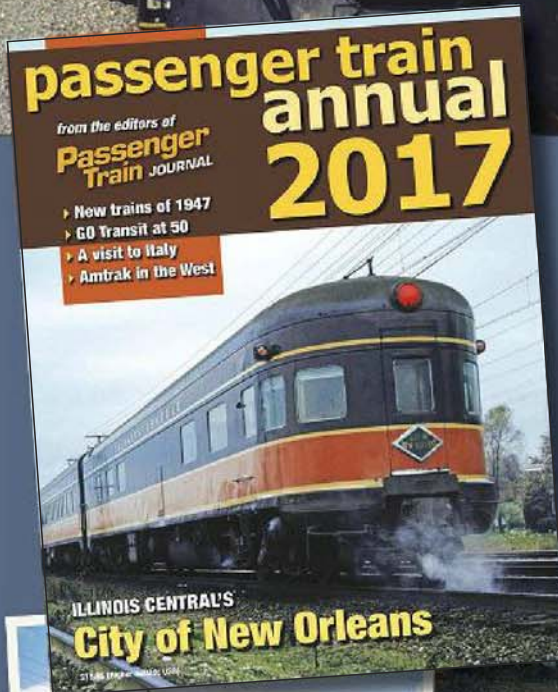
Note the hand-painted reporting marks on this car, seen at Camden, South Carolina, on November 21, 1978. The car was out of the General Steel Industries order delivered in late 1965 and early 1966. It had a different casting pattern number than the other orders but seems similar in all visible respects. —Paul Faulk photo

SAL 45681

One problem with the open bulkheads is that they are subject to abuse from the logs, as this picture illustrates. No date or location. —Larry Goolsby photo



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Receiving Yard *Compiled by Tony Cook*



Summer delivery for Athearn's Amtrak SDP40F

HO Scale Product News

HO—Athearn's all-new Genesis SDP40F diesel will arrive this summer decorated for Amtrak's red-nose Phase I paint scheme and will feature the flat-nose Phase II production body. In addition to its Amtrak offerings, Athearn will deliver

late-era rebuilt SDP40Fs as they appeared in Santa Fe service with pilot modifications and notches carved out of the nose, as well as other road-specific details. Athearn will make this release with Digital Command Control and Tsuna-

mi sound retailing for \$309.98 with non-sound DC models carrying a \$209.98 suggested retail price.

Athearn
1600 Forbes Way Suite 120
Long Beach, CA 90810
877-422-9316
www.athearn.com

Broadway Limited delivers HO ES44AC diesel

Any company wishing to submit products or press releases for Receiving Yard may do so by providing them to the address below. Submitted materials will not be returned.

Please send products to:

Railroad Model Craftsman,
ATTN: Tony Cook,
P.O. Box 177
Plattsburg, MO 64477

Email: tcook@rrmodelcraftsman.com

HO—Broadway Limited Imports HO-scale model of General Electric's (GE) ES44AC is now available. This new HO release comes with the company's Paragon 3 Digital Command Control sound and operating system that works with the manufacturer's Rolling Thunder unit.

Broadway Limited's ES44AC releases include the cab roof details replicating antenna arrays used by Norfolk Southern and Union Pacific. The production includes a pair of black Norfolk Southern ES44AC examples (8128 and 8130), as well as nine of the road's Heritage roster members: Central of Geor-



gia, Conrail, Interstate Railroad, Lehigh Valley, Nickel Plate Road, Norfolk & Western, Norfolk Southern (original), Pennsylvania Railroad, and Southern Railway. Union Pacific ES44AC models include the road's "Building America" slogan and come in two road numbers: 8096 and 8104. This new HO-

scale ES44AC provides a variable load-based smoke output unit to simulate diesel exhaust. The fully assembled diesel locomotive model carries a \$329.99 suggested retail price.

Broadway Limited Imports
9 East Tower Circle
Ormond, FL 32174
386-673-8900
www.broadway-limited.com



Aggregate Bin kit from Walther's

HO—Walther's offers an HO-scale Aggregate Bin kit (#933-4090) retailing for \$14.98. Molded in light gray plastic, the bulk loader includes overhead bins used for loading coal, gravel, woodchips, and more. The bays include clearance of 2-3/16 inches, allowing for place-

ment over rails or over payment for truck loading.

Wm. K. Walther's, Inc.
5601 W. Florist Ave.
Milwaukee, WI 53218
800-487-2467
www.walthers.com

Classic Metal Works trucks with trailers and box delivery trucks

HO—Classic Metal Works recently released its 1960 Ford delivery truck available with aluminum cargo box and tractor cabs, retailing for \$19.75 each, offered in Corinthian White (#30477), Goldenrod Yellow (#30478), and Monte Carlo Red (#30476).

Classic Metal Works' Chevrolet 1941-1946 box delivery truck now comes decorated for Electro-Motive Division, 7-Up, and Westinghouse. The model retails for \$19.75 and arrives assembled with user-applied rearview mirrors.

Classic Metal Works
3401 Silica Road
Sylvania, OH 43560
419-842-8114
www.classicmetalworks.com



Kellogg boxcar kit from Battle Creek Model Railroad Club

HO—Exclusive Battle Creek Model Railroad Club kits present Kellogg HO-scale boxcars. The club offers this 50-foot double-door boxcar decorated for Kellogg Cereal lease service in two schemes. One version presents the car with KELX reporting marks, while the other version presents a blue patched "CBIR" and road number reporting mark area. The CBIR is Battle Creek Model Railroad Club's Cereal Belt Industrial Railroad. The



Re-tooled Walther's Proto GP9 Phase I coming

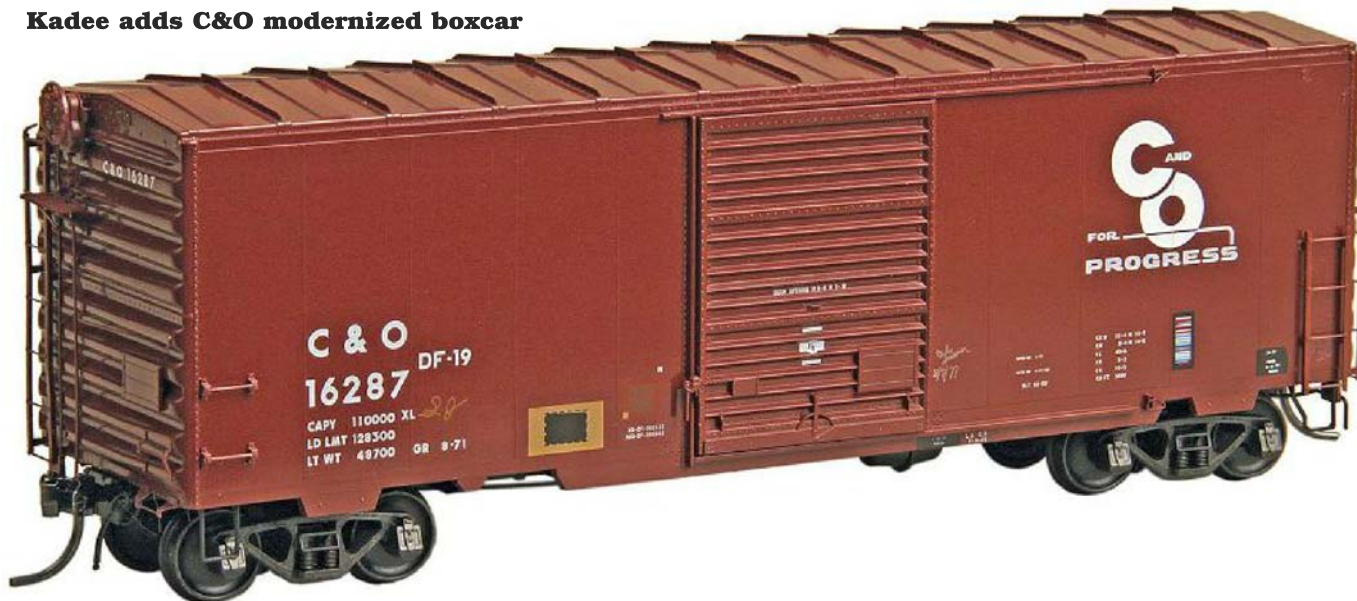
HO—Walther's will produce a revised version of its HO-scale Proto-series GP9. The revised features will include metal grab irons and lift rings, and more accurate hood contour for the shell. Models will come in standard DC version (MSRP: \$199.98), as well as Digital Command Control-equipped with ESU-LokSound Select audio (MSRP: \$299.98). The Phase I GP9 road names planned include Bangor & Aroostook, Burlington Northern, Grand Trunk Western, The Milwaukee Road, and Southern Pacific.

Wm. K. Walther's, Inc.
5601 W. Florist Ave.
Milwaukee, WI 53218
800-487-2467
www.walthers.com

Accurail-made HO-scale boxcar kit comes with two road numbers for each of the two lettering styles. The kits sell for \$25.99, plus \$8 shipping and handling to U.S. addresses. You may send your check or money order made out to BCMRRC at the address provided.

Battle Creek Model Railroad Club (BCMRRC)
2 West Michigan Avenue, Suite B-1
Battle Creek, MI 49015

Kadee adds C&O modernized boxcar



HO—Kadee's recently introduced modernized version of its popular 40-foot boxcar now comes decorated for Chesapeake & Ohio (C&O). This new HO-scale ready-to-run release presents a Boxcar Red model with white

lettering, including the "C&O for Progress" herald. Kadee's release depicts a 1950-built prototype as it would have looked following a 1971 visit to the road's shops. The model includes high brake wheel, but lacks running boards

on its roof. The \$36.95 model comes with 8-foot Youngstown sliding door.

Kadee Quality Products Co.
673 Avenue C, White City, OR 97503
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www.kadee.com

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Athearn FEF 4-8-4 Northern returning with LokSound

HO—A new production of Athearn's Genesis-series Northern steam locomotive models will come with ESU-LokSound as a factory-installed option. Due this October, the coming group will include Union Pacific decorated FEF-3 class Northern steam locomotives in four different looks: 1946 two-tone gray, 1955 black with silver front boiler, as well as post-steam era No. 8444 (1962 and later appearance) and contemporary No. 844 (2016 detail and decoration).

For this release, Athearn teams with ESU to provide Digital Command Control and audio for this Genesis Northern steam locomotive model. ESU's LokSound Select will be tender-mounted and will feature an all new digital recording of Union Pacific No. 844 recorded in the fall of 2016. The sound output will include synchronized cuff, whistle, bell, blow-down, air compressor, dyno, and pop-off valve audio. Operators will have control of whistle (long and short), bell, brake squeal, coupler crash, and more. The non-sound Athearn Genesis FEF 4-8-4 Northern carries a \$519.98 suggested retail price. The release with ESU-LokSound Select DCC and sound lists for \$619.98.

Athearn
1600 Forbes Way Suite 120
Long Beach, CA 90810
877-422-9316
www.athearn.com

Streetcar with sparking pole

HO—A new enhanced version of Bachmann's PCC streetcar presents digital control, sound, and lighting effects. Available in six liveries, the new HO-scale model includes SoundTraxx-made SoundValue system for Digital Command Control (DCC) and audio output. Additionally, this new model includes illumination on the end of the trolley pole able to reproduce the sparking effect of the prototype and comes decorated for Allegheny Transit

(Pittsburgh), Chicago, New Jersey Transit, Pacific Electric, Philadelphia Transit Company, and San Diego. The \$225 model includes operating headlight, illuminated interior, die-cast power truck with new enhanced detail on wheels and brakes, in addition to DCC and sound capability.

Bachmann Industries, Inc.
1400 East Erie Avenue
Philadelphia, PA 19124
800-356-3910
www.bachmanntrains.com

Broadway Limited Imports adds HO auxiliary tenders

HO—Broadway Limited Imports (BLI) introduces a new HO-scale model for its line: auxiliary water tenders. The planned production will include Chesapeake & Ohio (black and Safety Express scheme), The Milwaukee Road, Norfolk & Western (four numbers with gold road name, and maroon stripe), Southern Pacific (*Daylight* livery). Additionally, BLI will release a black, unlettered water tender. Broadway Limited Imports states its HO-scale auxiliary water tender matches prototypes used by Norfolk & Western Class A, Y6b, and J steam locomotives.

The \$79.99 model will include many separately applied details include handrails, ladders, brake wheel, and roof walkway, as well as feature a detailed underbody. This model will navigate curves from 18-inch radius and wider and will come with metal wheels and Kadee-compatible knuckle couplers. BLI's auxiliary water tender will include directional LED lights.

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Abrams tanks from Artitec

HO—Artitec offers fully assembled and decorated HO-scale Abrams tank models. Examples include a green Abrams A1 (#6870137) and M1A1 "Desert Storm" decoration (#6870142). Reynauld's Euro Imports these HO tank models for \$38.99 each. You can visit Rey-

nauld's Euro Imports online to view other Artitec releases that include additional military, as well as civilian vehicles.

Reynauld's Euro Imports

122 N. Main St., Elburn, IL 60119

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www.reynaulds.com

Bowser X32 boxcars this fall

HO—Bowser will deliver a new production of its X32 boxcars this fall. The announced double sliding-door boxcar road names include Delaware & Hudson; Detroit & Mackinac; Detroit, Toledo & Ironton; Manufacturers Railway Company; Norfolk & Western; Northern Pacific; Oregon, Pacific & Eastern; Pennsylvania Railroad (shadow keystone, circle keystone, and automobile labeled with circle keystone); Tennessee, Alabama & Gulf; Virginian;

and Wabash. Pennsylvania Railroad single sliding-door X32 boxcars will deliver with small circle keystone and large shadow keystone lettering. Three road numbers will be offered for each X32 boxcar release. The fully assembled models will sell for \$24.95 each.

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LGB plans Rio Grande Prospector for G

G — A new collection of G-scale Rio Grande equipment is coming from LGB. Featuring the road's early-1960s introduced single-stripe Aspen Gold and silver livery, LGB will offer Rio Grande F7A diesels in two road numbers. The powered F7As, retailing for \$879.99 each, will include mfx digital electronics for operation and sound. A matching

non-powered Rio Grande F7B (MSRP: \$409.99) is coming that will possess a built-in speaker that will work via a cable connection with LGB's F7As.

Decked out in the road's *Prospector* dress, LGB will offer Rio Grande passenger cars to go with its new G-scale F7s. Retailing for \$389.99 each, the series will include baggage, coach (two

numbers), dome, and diner. To round out the set, LGB will have a boat-tail observation car (MSRP: \$439.99) for its Rio Grande set.

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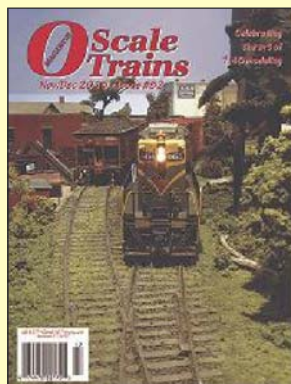
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N Scale Product News



Lowell Smith's Great American Circus & Wild West Show continues

N—Lowell Smith's 29th release in the company's Great American Circus & Wild West Show is available for \$72. The release presents Micro-Trains 70-foot Warren circus flatcar model deco-

rated to match the rest of this collector series train with silver model featuring black-and-red lettering and includes road number 24. Riding on the flatcar is a Trainworx-made trailer with a mul-

ticolor "How the West Was Won – The Overland Stage" artwork mural.

Lowell Smith Signature Series
P.O. Box 219
Gresham, OR 97030
www.lowellsmith.net

S.J. Asher Supply from RSLaserKits

N—RSLaserKits' new S.J. Asher Supply (#3062, MSRP: \$49.99) kit provides modelers with a small stone building useful for a number of possible situations and placements on a model layout. The assembled kit takes up a 2-3/8-inch wide by 6 1/2-inch long footprint. The front building is two stories with porch, awning, and signage. The single-story rear section includes elevated dock with loading doors.

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Kansas City Southern Bicentennial boxcars

N—The N Scale Enthusiast offers a 2-pack release (MSRP: \$78) presenting a pair of Kansas City Southern (KCS) boxcars decorated for the 1976 American Bicentennial. The 50-foot plug-door boxcar comes with light blue sides, aluminum doors, as well as black roof and ends. Made by Micro-Trains exclusively for The N Scale Enthusiast, these models ride on silver roller bearing trucks and come

equipped with knuckle couplers. The set includes the prototype KCS 120871 and a second car, carrying road number 121976, featuring decoration created by The N Scale Enthusiast with large red, "Happy Birthday America" lettering.

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NYC passenger cars from Bachmann

N—Bachmann's new N-scale passenger cars are now available in New York Central. The smooth-side cars present scale-length reproductions of streamline baggage (72-foot), coach, and observation car (both 85-feet). The models include two-tone gray body with white lettering and black roof. The ready-to-run offerings include metal wheels, including interior lighting, and body-mounted E-Z Mate Mark II knuckle couplers. For more details please visit the company website at www.bachmanntrains.com.

Bachmann Industries, Inc.
1400 East Erie Avenue
Philadelphia, PA 19124
800-356-3910

www.bachmanntrains.com

Con-Cor 45-, 48-, and 53-foot containers

N—A new collection of N-scale intermodal containers is available from Con-Cor. Available in 2-packs, the 45-, 48-, and 53-foot containers are offered in a variety of road names. Con-Cor's 45-foot corrugated container comes in Container Ocean Traders and Safmarine. The new 48-foot standard containers are decorated for Allied Van Lines, American Presidents Line (1990s logo), Canadian National (CN Laser), Canadian Pacific, Canadian Tire, Florida East Coast, J.B. Hunt, Pacer (1990s logo), and United Van Lines. 53-foot standard containers are offered in Burlington Northern (BN America), Canadian Pacific (CP Rail Intermodal), and Con-Quest International. Each 2-pack includes two fully assembled containers with different road numbers, retailing for \$19.98.

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Iowa Pacific SD90/43MAC from Kato Kobo Custom

N—Decorated in an Illinois Central-inspired scheme, Iowa Pacific Holdings SD90/43MAC diesels are available in limited quantities as a special release from Kato's Kobo Custom line. This custom-

built N-scale Iowa Pacific Holdings SD90/43MAC (#176-5621) comes numbered 111 and sells for \$190. You can sign up at the company's website to be included in Kato USA's newsletter, and you'll receive noti-

fication on new Kobo releases and other special projects.

Kato USA, Inc.
100 Remington Road
Schaumburg, IL 60173
847-781-9500
www.katousa.com

New roads for Bachmann's wood-side reefer

N—Bachmann offers five additional paint schemes for its N-scale reefer. The model reproduces a 40-foot wood-side refrigerator car prototype with ice hatches on its roof. The road names include American Refrigerator Transit (with Missouri Pacific and Wabash heralds), Merchant's Despatch, Pacific Fruit Express (with Southern Pacific and Union Pacific heralds), Pure Carbonic Co. (white Merchant's Despatch scheme), and Union Refrigerator (with Soo Line herald). Bachmann's 40-foot wood-side reefer arrives ready for N-scale operation with metal wheels and the company's own E-Z Mate Mark II knuckle couplers. This model retails for \$37.

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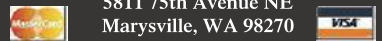
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Flatcar Bridge is new from The N Scale Architect

N—The N Scale Architect's 9th release in its Trackside Series is a Flat Car Bridge (#10041) kit. The kit presents a re-purposed N-scale flatcar with photo etched railings, two concrete abutments, three laser-cut wooden trestle supports, and rail or road wooden tread options for the deck. The \$35.95 release will provide

many opportunities for use on N-scale layouts. Caboose and covered hopper included in image for illustration purpose and not included with kit release.

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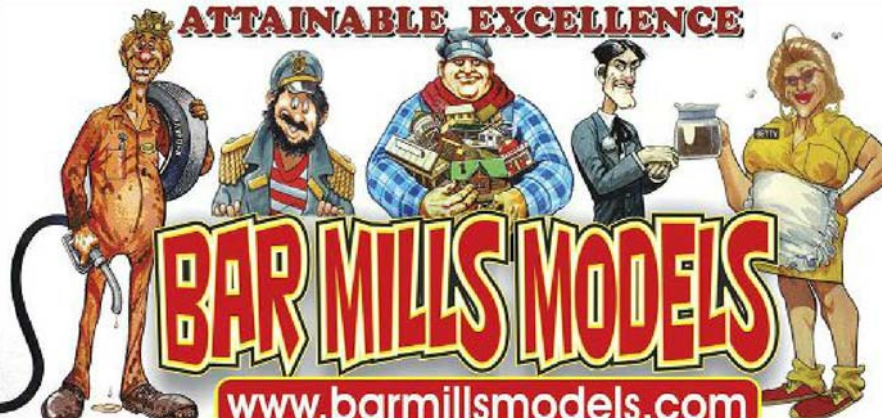
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O Scale Product News



Lionel plans "Built To Order" SD40

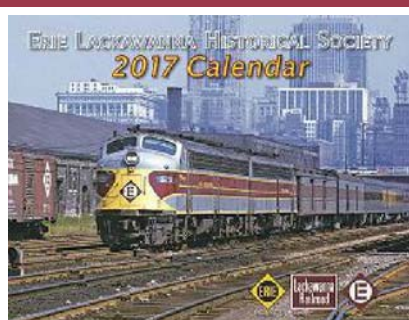
O—A new production of O-gauge SD40 diesels from Lionel will be Legacy-series offerings made as part of the manufacturer's "Built To Order" collection. Road names available for pre-order include CSX (early yellow ends), Pennsylvania Railroad, Santa Fe, Southern Pacific (rebuilt SD40R

with light package), Southern Railway (high-hood), Union Pacific (non-dynamic with contemporary lettering), and Western Maryland (Circus colors). The powered SD40 carries a \$649.99 list, Lionel lists two road numbers for each road name. You'll find Lionel's Southern Pacific SD40R

included in the company's new Salad Bowl Express train set. That set's contents will include four LionScale 57-foot mechanical reefers.

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CP Rail flatcar with load from Menards

O—Menards Collectibles has a new flatcar with lumber load available for \$29.99. The plastic flatcar includes die-cast metal trucks with couplers.

The deck includes a simulated wood finish and stacks of chained down lumber. The black flatcar comes lettered in white for CP Rail (#279-3435). A Cana-

dian National 50-foot flatcar with bulkheads (#279-3434, MSRP: \$29.99) is available with log load.

[Menards, www.menards.com](http://Menards.com)

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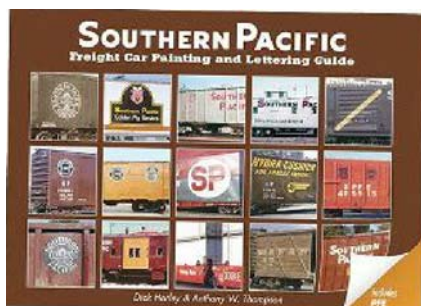
See Ken Patterson's What's Neat video on YouTube (Sept 2016) to see just how easy it can be!
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Southern Pacific Freight Car Painting & Lettering Guide

Written by experts in the field, this volume offers extensive coverage of painting and lettering practices for SP freight cars, as well as PMT trailers used in TOFC service, SP affiliated Evergreen and Golden West Services and Pacific Fruit Express. Based on official SP and PFE documents, plans and drawings. Library bound, 11x8½ with dust jacket, 192 pages, 291 photos, 122 diagrams, color throughout.

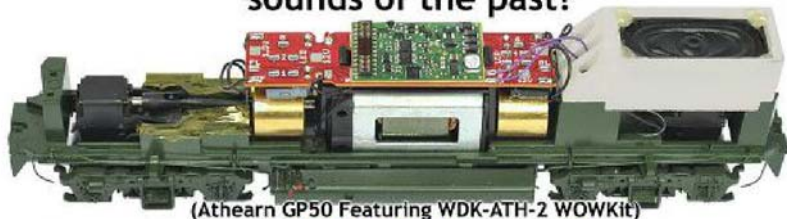


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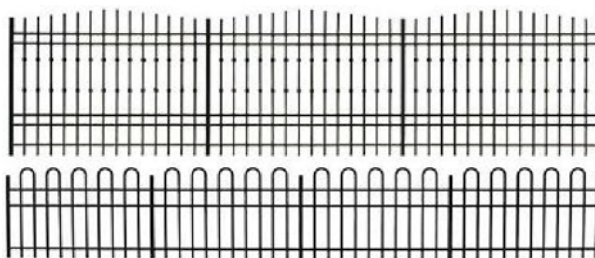
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Fence kits are back from Atlas Laser Design

O—Three styles (Hairpin Classical, Hairpin Modern, and Victorian) fence kits are available from Atlas O in the manufacturer's Atlas Laser Design series. The Victorian fence is 30-inches long and sells for \$29.95, while each Hairpin kit contains 28-inches of fence and retails for \$23.95.



Atlas O
378 Florence Avenue
Hillside, NJ 07205; 908-687-0880
www.atlaso.com

3rd Rail Division adds new roads for O-scale F7s

O—Recently delivered from 3rd Rail Division of Sunset Models is a second run of Santa Fe *El Capitan* passenger cars. The 8-car set (available in 2- and 3-rail versions) includes baggage, baggage/dormitory with transition hood, a pair of Hi-Level chair cars, lounge, diner, and two step-down chair cars (one includes tail sign). Coming to power this *El Capitan* set, 3rd Rail Division will have F7A and F7B diesels decorated for Santa Fe red-and-silver Warbonnet livery. Expected by mid-year, these new O-scale F7s will arrive in 2- and 3-rail versions. Retailing for \$599.95 each and available in powered versions with digital control and sound, these F7s will include plastic body shells with separately applied details. The F7A will possess a

fixed front pilot and detailed, as well as illuminated cab interior.

In addition to Santa Fe passenger offerings, 3rd Rail Division of Sunset Models plans freight blue-and-yellow Santa Fe F7A and F7B releases. Other road names coming include Chesapeake & Ohio, General Motors Demonstrator, Great Northern (*Empire Builder* livery), Rio Grande (Aspen Gold and silver 4-stripe), Southern Pacific (Black Widow), and Western Pacific (*Zephyr* scheme). Production quantities will be limited and the company requests reservations.

3rd Rail Division of
Sunset Models, Inc.
16 Beta Court
San Ramon, CA 94583
925-820-7701
www.3rdrail.com

Great Decals adds Van Iderstine set for O

O—Great Decals now offers a new O-scale decal set for creating Van Iderstine tallow tank car models. The white decal lettering includes road numbers (all nine prototypes 1001-1009), dimensional data, and more. Each \$8.40 set will provide decal ma-

terials to letter one tank car model. You'll find a prototype image on Great Decals' website.

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Fairfax, VA 22031
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Rusty Rail presents Hobo Shack for O

O—Rusty Rail's Hobo Shack (#RRS-O-08, MSRP: \$22) requires only minor assembly to complete this rustic structure. The kit provides four walls and a roof with positionable door. A collection of details for placement around the shack, as well as metal

stovepipe, are included. The casting comes unpainted and measures 3½ x 2¼ inches and is 2-inches tall.

Rusty Rail
 P.O. Box 27135
 Fresno, CA 93729
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www.rustytrain.com

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HO SCALE

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Z — Recent additions to Micro-Trains Z-scale rolling stock include Chicago, Burlington & Quincy (CB&Q) and Denver & Rio Grande Western (D&RGW) boxcars. Both offerings present 40-foot sliding-door examples. The recent D&RGW release (#50000901, MSRP: \$33.60) presents the road's attractive Aspen Gold and silver decoration and rep-

resents a 1959-built car with high ladders and brake wheel, as well as rooftop running boards. Retailing for \$25.95, Micro-Trains' new Chinese Red CB&Q 40-foot boxcar (#50300151) presents a modernized car lacking running boards and dis-

playing modified short ladders and low-position brake wheel.

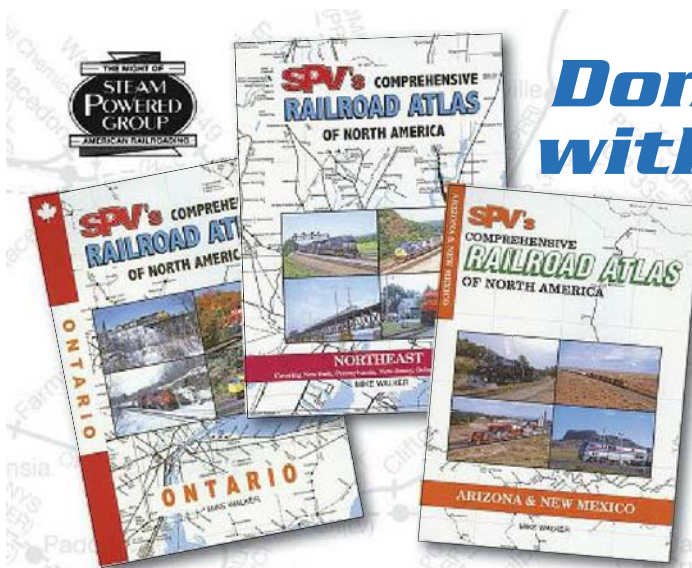
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Rail Books

Railbook Review

Trail of the Turbo: The Amtrak Turboliner Story by Dale A. Johnson

**Dale A. Johnson
3232 Wellbrook Lane
Southaven, MS 38672
630-234-3788**

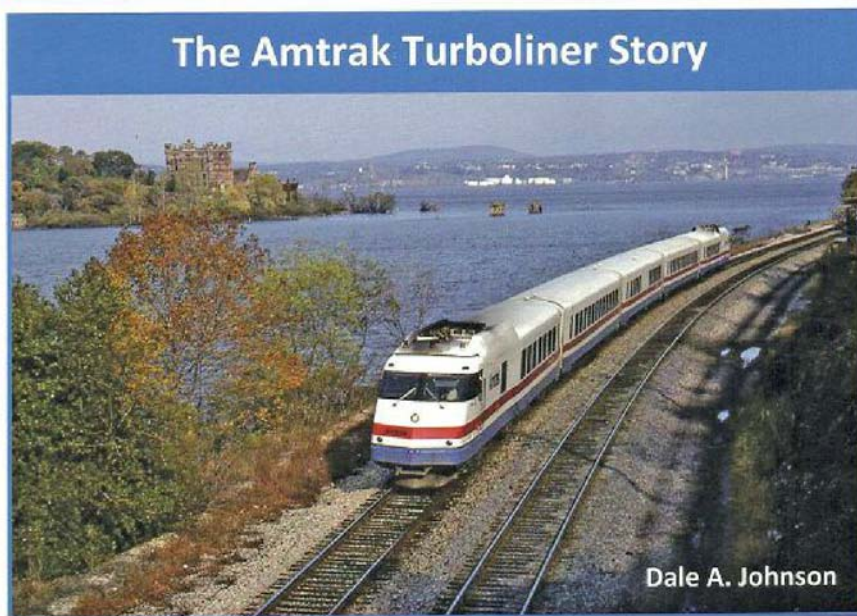
Amtrak's early history presents an exciting period in railroading. One of the more curious highlights was Amtrak's turboliner program. Imported from France, the ANG-Frangeco turbo came to the U.S. in the early 1970s to meet a number of needs cited by Amtrak management. Author Dale A. Johnson provides the background for Amtrak's decision, and you'll gain an understanding of why the passenger carrier selected this turboliner. Images, both black & white and color, throughout *Trail of the Turbo* aid in telling the history of this program. Many, if not most, of the photos have never been published prior to this softcover 160-page presentation.

In-depth detail will aid the modeler, as well as railfan, interested in these Amtrak oddities. The book provides coverage for the trains with numerous images covering appearance changes and rebuilding over their years of service. Images illustrate the paint scheme variations and show the interiors for Amtrak's turboliners. Complete roster information appears, in addition to reproductions of vintage Amtrak promotional artwork promoting its turboliner services over various routes.

For the HO modeler, Jouef produced this French turboliner in the



Trail of the Turbo



1970s. Tooling included cab car (powered and non-powered), coach, and food service car in Jouef's line. The power was a single-truck mechanism that wasn't too impressive and the wheel flanges are deep on this model. On the plus side, the plastic shell toolings are decent, and the model included separate handrails. Picking up a copy of *Trail of the Turbo* may well lead the hobbyist down a trail of locating a set of Jouef's HO

turbos and taking that vintage release and turning it into a 21st Century model of merit.

The book is available direct from its author/publisher for \$40, plus \$5 (U.S. shipping) via check or money order. Purchased for information and entertainment, *Trail of the Turbo* will please any passenger train enthusiast. For the modeler, a copy of this will likely spark ideas of a great craftsman project. — **TONY COOK**

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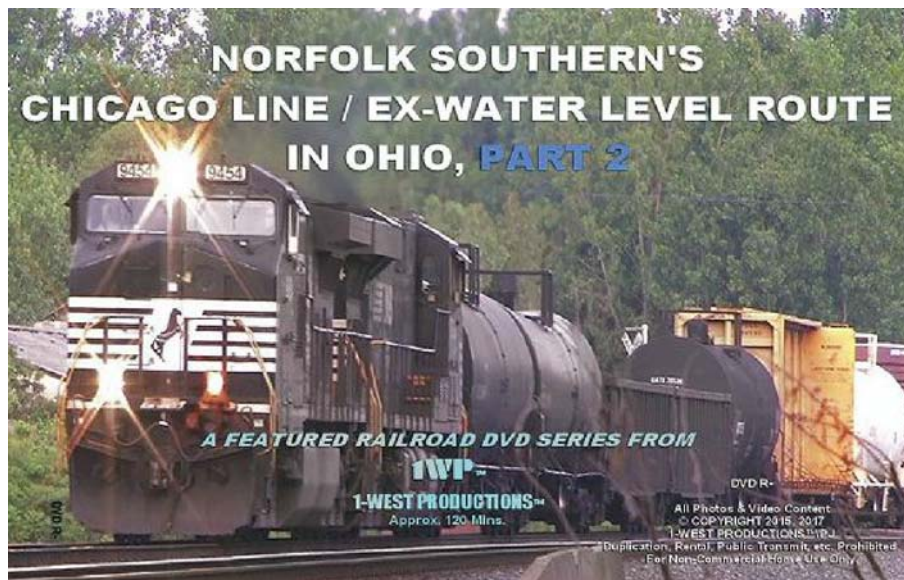
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Publications of Interest

Norfolk Southern DVD from 1-West Productions



Featuring contemporary action along the former New York Central Water Level Route, 1-West Productions Railroad Video and Audio presents *Norfolk Southern's Chicago Line/Ex-Water Level Route in Ohio, Part 2*. This two-hour DVD program presents 16x9 video and audio of Norfolk Southern's Dearborn Division. Shot in 2015, you'll see a variety of freights and motive power. This line continues to be an important Norfolk Southern connection between Berea, Ohio, and Chicago, Illinois. This one-time New York

Central line joined Norfolk Southern's system with the 1999 breakup of Conrail. In addition to Norfolk Southern diesels (both wide-cab and standard-cab roster members), you'll see BNSF, Canadian National, Canadian Pacific, and Union Pacific diesels. All 1-West Productions DVDs sell for \$20, two for \$35, or four for \$70, and include free shipping in the U.S.

1-West Productions
P.O. Box 355
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www.1westproductions.com

2017 edition of On30 Annual arrives

On30 enthusiasts will want to include a copy of the latest *On30 Annual* to their shopping list. This popular publication marks its 12th year with this new edition. Priced at \$19.95, the new *On30 Annual 2017* features a number of articles on O-scale narrow gauge model railroading. The new softcover annual includes a conversion project for a Rio Grande C-21 steam locomotive, using timber trestle jigs, a Tweetise-inspired layout, and much more.

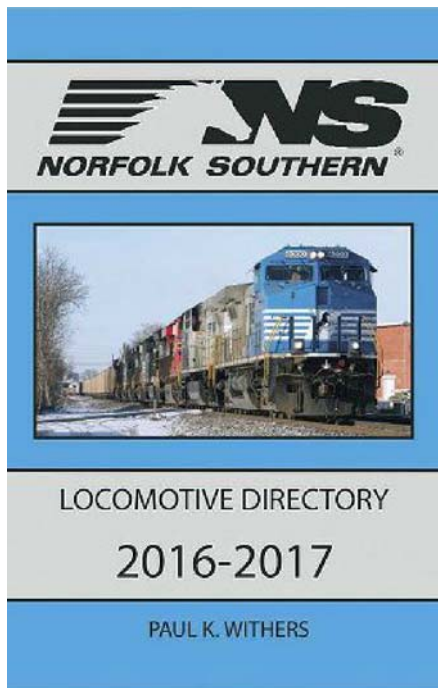
You'll find a copy of the *On30 Annual 2017* at your hobby or book dealer. You can also order your copy direct online from White River Productions' website or by calling the publisher's toll-free number.

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Withers Publishing presents Norfolk Southern update



For two decades, Withers Publishing has been tracking Norfolk Southern (NS) diesel rosters and providing rail enthusiasts with a handy guide compiling and presenting the data. Now available is *Norfolk Southern Locomotive Directly 2016-2017* by Paul K. Withers. Inside this 6x9-inch vertical format guide, you'll see and be provided with details on all the more than 4,000 units in the NS roster. The \$34.95 softcover book includes all color images. You'll find the new *Norfolk Southern Locomotive Directly 2016-2017* at book dealers and direct from Withers Publishing.

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Timetable listings of model railroading events are printed free of charge on a space-available basis. Notices must be submitted at least 90 days prior to event date to be considered for publication in the magazine. White River Productions is not responsible for errors in listings, please confirm details with event sponsor.

Please submit your events online at:
www.rrmodelcraftsman.com/timetable.

SPECIAL EVENTS

SANTA CLARA, CALIFORNIA, May 25-28, 2017. O Scale West and S West at Hyatt Regency Santa Clara, 5101 Great America Parkway. The largest meet west of the Mississippi focused on two-rail O and S scale model railroading! Enjoy swap meet, contests, clinics, and several home and club

layouts open for self-guided visits. See web site for registration and details. Registration: \$25.00-\$40.00. Contact Rod Miller at (650) 218-5752 or visit www.oscalewest.com

ENFIELD, CONNECTICUT, June 22-25, 2017. Yankee Clipper, The 49th O Scale National Convention at Holiday Inn, 1 Brightmeadow Blvd. Enjoy our 2017 O Scale National Convention featuring dealers, clinics, model contests. Tours: Essex Steam Train, Pioneer Valley Live Steamers. Various home and club Layouts. Presented by Southern New England Model Railroad Club. Registration: Adults: \$25.00, \$30.00 after 5/1. Spouses free. Contact Mike Goguen at (978) 928-5724 or visit www.snemrrc.org

COLLINSVILLE, ILLINOIS, June 23-24, 2017. 11th Annual St. Louis Railroad Prototype Modelers Meet at Collinsville Gateway Convention Center, 1 Gateway Drive. This year's meet features expanded clinics, vendors, exhibitors, manufacturers, historical societies, and more than 2,000 models on display. Hands-on Learning Stations dedicated to painting, weathering, tracklaying. Enjoy our Power Point Pizza Party, RPM Round Up, and Bandanas BBQ. Registration: \$25.00 both days, \$20.00 Saturday only. Contact Lonnie Bathurst at (217) 556-0314 or visit www.icg.homespring.com/rpm/stlrrpm

HOUGHTON, MICHIGAN, July 9-15, 2017. 8th Annual Summer Youth Program: Rail and Intermodal Transportation at Michigan Technological University, 1400 Townsend Dr. Rail and intermodal career explorations all week long with hands-on and classroom activities! Explore how the affects of rail stability, operate a computer locomotive simulator, and investigate logistics management operations, with classroom and field trip experiences. See web site for details. Registration: \$450.00. Contact David Nelson at (906) 487-1734 or visit www.rail.mtu.edu/event/rail-and-intermodal-transportation-2017

ALLENTOWN, PENNSYLVANIA, May 19-20, 2017. East Penn Traction Club 23rd Annual National Model Trolley Meet at Allentown Fairgrounds, Agri-Plex Charles Hall, 17th and Chew Streets. Enjoy the largest trolley modeling event in North America featuring operating layouts in all scales, clinic presentations, vendors, and more. This year's theme is Deck Roof Trolleys. See web site for registration details. Registration: \$23.00 advance; \$25.00 after May 1. Contact Charles P. Long at (215) 247-1951 or visit www.eastpenn.org/meet2017

SCRANTON, PENNSYLVANIA, May 12-13, 2017.

2017 Transportation History Exposition - Key Lock & Lantern Convention at Radisson Lackawanna Station Hotel, 700 Lackawanna Avenue. The annual Key, Lock & Lantern Convention is a full weekend of events. Transportation History Exposition features historical exhibits and railroad memorabilia sales, lectures, banquet, train excursions and tours. Visit our web site for registration info. Registration: Varies, see web site. Contact David Hamilton at (518) 439-8392 or visit www.klnl.org

BULVERDE, TEXAS, May 13, 2017. "What is Model Railroading?" at Bulverde Spring Branch Library, 131 Bulverde Crossing. Discover the hobby of model railroading. Sponsored by the Bulverde Spring Branch Library and the San Antonio NTRAK Association. Admission: Free. Contact Bulverde Spring Branch Library at (830) 438-4864 or visit www.bsblibrary.org

NMRA EVENTS

DURANGO, COLORADO, June 8-11, 2017. Animas Rails 2017 Rocky Mountain Region Annual Convention at DoubleTree Hotel, 501 Camino Del Rio. Enjoy our mini-convention, highlighted by a train ride aboard the Durango & Silverton Narrow Gauge, followed by yard and shop tour. Convention features model contest, clinic presentations, layout tours, and more. See web site for details and registration. Presented by Rocky Mountain Region NMRA. Registration: \$45.00/Primary Registrant. Contact Richard Hunter at (303) 364-4814 or visit www.rmr-nmra.org

ATLANTA, GEORGIA, May 16, 2017. Piedmont Division Monthly Meeting at Holy Innocents Episcopal Church, 805 Mt Vernon Hwy NW. Join our monthly meeting featuring, brief announcements, theme of the month and a clinic presentation. Join us for an evening of model railroading fun and fellowship! Admission: Free. Contact Gary Jarabek at (770) 509-6941 or visit www.piedmont-div.org

PROSPECT HEIGHTS, ILLINOIS, May 21, 2017. NMRA Fox Valley Division Membership Meeting at Gary Morava Recreation Center, 110 W. Camp McDonald Road. Our monthly membership meeting features the clinic presentation Operations Under Time Table and Train Order Authority. Model contest: Open Load. Enjoy contest awards and refreshments. Guests welcome. Admission: Free. Contact Mike Hirvela at (847) 360-9579 or visit www.foxvalleydivision.org

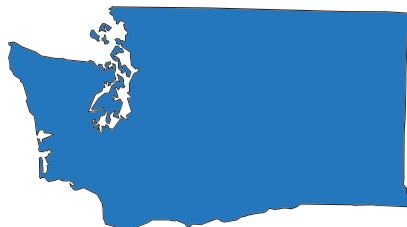
LOUISVILLE, KENTUCKY, May 18-21, 2017. 2017 Mid-Central Region Convention, "The PanAmerican" at The Galt House, 140 N Fourth St. Hop on board for a veritable smorgasbord of model railroading activities you have come to expect at Mid-Central Region conventions, including clinics, contests, prototype tours, layout tours, operating sessions, non-rail events, banquet, and more! Check out the convention website for details. Admission: \$90.00. Contact Fred Soward at (502) 499-0770 or visit www.2017panamerican.org

BURNABY, BRITISH COLUMBIA, CANADA, May 5-7, 2017. Railway Modellers Meet of British Columbia at Simon Fraser University - Burnaby Campus, 8888 University Drive. The second annual RMMofBC features operating sessions, layout tours, clinic presentations, model displays and more. Please visit our web site for details and registration. Presented by 7th Division Northwest Region NMRA. Registration: \$60.00 regular/\$45.00 NMRA. Contact Brian Clogg, Registrar at (604) 588-2194 or visit www.railwaymodellersmeetofbc.ca

CLUB OPEN HOUSE

CONYERS, GEORGIA, May 13, 2017. Ride the Conyers & Hightower Trail Railroad at North Georgia Live Steamers, 1632 Centennial Olympic Parkway. Enjoy our first public run day of the 2017 season. Help celebrate our organization's 39th year, and fourth year of operation at Georgia International Horse Park. Admission: \$2 per person per ride. Contact Robby Mossman at (770) 000-0000 or visit www.northgeorgialivesteamers.org

OAK PARK, ILLINOIS, May 6, 2017. Oak River Railroad Spring Open House at Dole Learning Center, Lower Level, 255 Augusta Boulevard. Oak Park Society of Model Engineers opened its doors in 1964 and is home to the Oak River Railroad,



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our large HO scale model railroad based on the Chicago Great Western rail line from Oak Park to Central Iowa. Admission: Free. Contact Henry Kranz at (708) 302-4231 or visit www.opsme.org

PARKERSBURG, WEST VIRGINIA, May 20, 2017. Spring Open House at Mid-Ohio Valley Model Railroad Club, 610 Green Street. Enjoy model trains operating in G, O, S, HO, and N scales. Raffle drawing for train set. Refreshments available. Admission: Free. Contact Tom Ratkovich at (304) 588-5417 or visit www.movmrc.org

TRAIN COLLECTOR'S MEETS

OVERLAND PARK, KANSAS, July 29, 2017. Turkey Creek Division Train Show & Swap Meet at Shawnee Mission North High School, 7201 Johnson Drive. Enjoy our train show and swap meet from 8am-3pm, self-guided off-site layout tours from 3:30pm-8pm. Presented by Turkey Creek Division MCR NMRA. Admission: \$6.00. Contact Larry Diehl at (816) 804-0152 or visit www.tc-nmra.org

DESHLER, NEBRASKA, July 1-2, 2017. Train Show & Open House. Enjoy our train show at the Thayer County Events Center featuring clinics by special guests including Pelle Seeborg, Doug Geiger, Chris Brimley, and manufacturer representatives from ScaleTrains, Athearn, InterMountain Railway, and Rapido. Visit our store open house at Spring Creek Model Trains. See website for details. Admission: \$6.00 per person. Contact David Zucker at (402) 365-7628 or visit www.springcreekmodeltrains.com/openhouse

CONTOOCOOK, NEW HAMPSHIRE, May 6, 2017. The Contoocook Depot Model Railroad Show at American Legion Post 81, 169 Bound Tree Rd. Enjoy operating layouts, vendors selling new and used model railroad supplies in all scales, raffles, and more. Refreshments available. Tour our restored 1849 Boston & Maine depot and visit one of the oldest covered railroad bridges in America. Admission: \$5.00, under 10 free with paid adult. Contact Steve Lux at (603) 491-3420 or visit www.contoocookdepot.org/trainshow

FRANKLIN, NEW JERSEY, May 7, 2017. 15th Annual Franklin Model and Toy Train Show & Sale at Littell Community Center, Monsunhurst Rd. Enjoy our train show featuring new and used model trains for sale, railroad collectibles, operating layouts, and more. Admission: \$5.00, under 12 free. Contact John Bazelewich at (973) 697-6539 or visit www.trainweb.org/sussexctvrrclub

VAN WERT, OHIO, July 29-30, 2017. Model Railroad Show & Swap at Van Wert County Fairgrounds, 1055 S. Washington St. - State Route 127. Enjoy our train show featuring more than 100 vendor tables. Operating model railroad displays. Refreshments available. Admission: \$4.00, Children 12 and under Free. Contact Jan Dunlap at (419) 238-4207 or visit www.vanwertcountyhistoricalsociety.com

JEFFERSON, TEXAS, May 20-21, 2017. Jefferson Train Days and Model Train Show at Transportation and Visitors Center, 305 E. Austin Street. Enjoy our train show featuring vendors, swap tables, and operating layouts. Includes tour of R.D. Moses Texas & Pacific model railroad. Separate amusements include steam train ride and tour of Jay Gould's private car. Sponsored by Jefferson Historical Museum and Jefferson & Cypress Bayou Model Railroad Club. Admission: \$6.00; Children under 6 free. Contact Norman Buell at (903) 240-6039 or visit www.JeffersonTrainDays.com

TAYLOR, TEXAS, May 6-7, 2017. Austin Area Train Show at Williamson County Expo Center, 210 Carlos G. Parker Blvd. Enjoy over 16,000 sq. ft. of model railroading including, operating layouts, dozens of vendors offering new and used trains in all scales, clinics, raffle, self-guided off-site layout tours, and more. Free parking. Refreshments available. Presented by Cen-Tex Division NMRA. Admission: \$7.00 adults; youth 12 and under free with adult. Contact Peter Kazmir at (512) 653-3824 or visit www.centexnmra.org/trainshow

FISHERSVILLE, VIRGINIA, May 7, 2017. 31st Annual Shenandoah Valley Model Train & Railroading Show at Augusta Expo, 277 Expo Road. Enjoy more than 21,000 sq. ft. of model railroading

including vendors, model trains, memorabilia, railroad historical societies, large model railroad displays, and more. Free parking. Presented by the Augusta County Railroad Museum and Augusta County Model Railroad Club. Admission: \$5.00 adults, youth under 12 with paid adult free. Contact Bill Kauffman at (540) 248-4143 or visit www.acmrrc.org

WAUPACA, WISCONSIN, June 17-18, 2017. 28th Annual Strawberry Fest Model Railroad Show & Model Contest at Waupaca Recreation Center, 407 School Street. Fun-filled family event featuring model train layouts, demonstrations, exhibits, vendors, model contest and more. Refreshments available. See web site for details. Admission: FREE. Contact Roger Hidebrandt at (715) 258-8218 or visit www.warmtd.com

RAILFAN EVENTS

DURAND, MICHIGAN, May 18-21, 2017. Durand Railroad Days at Durand Union Station, 200 Railroad St. Join for Durand Railroad Days festival at the historic Durand Union Station, a well-known railfan hotspot. Home to the Michigan Railroad History Museum, the restored 1905 station is served daily by Amtrak. Festival activities include tours, vendors, award presentations, model train show, and more. Admission: Free. Contact Michael Boudro at (989) 288-3561 or visit www.durandstation.org

ROCHESTER, NEW YORK, May 20, 2017. Rails and Ales Train Rides at Rochester & Genesee Valley Railroad Museum, 282 Rush Scottsville Road. Sample delicious craft beer and cider from eight local breweries. Enjoy train rides that tour our museum grounds and visit New York's largest collection of historic trains. Refreshments available. Free soft drinks for Designated Drivers. Age 21 and over only! All trains depart from our restored 1909 Erie Railroad train station. Admission: \$20.00 Tasting Ticket, \$15.00 Designated Drivers. Contact RGVRRM at (585) 533-1431 or visit www.rochestertrainrides.com

DAYTON, OHIO, June 24-25, 2017. 12th Annual Carillon Park Rail Festival at Carillon Historical Park, 1000 Carillon Blvd. Enjoy our railroad festival featuring model train displays, historic exhibits, live steam engines, flea market and vendors, and miniature train rides throughout the weekend. Refreshments available. See web site for details. Admission: \$8.00 adults, \$7.00 seniors, \$5.00

children. Contact David Oroszi at (937) 238-5655 or visit www.railfestival.com

MARION, OHIO, August 12, 2017. Summerail 2017 at Marion Palace Theater, 276 W. Center St. Enjoy multi-media slide show presentations, railroad flea market, and visits to Marion Union Station and AC Tower. Presenters include Marshall Beecher, Mike Biehn, Steve Carter, Steve Glischinski, Scooter Hovanec, Barry Lennon, Garland McKee, Eric Miller, Don Toon, and Lance Wales. Admission: \$25.00 per person, \$5.00 train show only. Contact Bill Haines at (937) 898-8220 or visit www.summerail.com

PHILA, PENNSYLVANIA, May 21, 2017. Friends of Philadelphia Trolleys PCC Charter at SEPTA Elmwood Depot, 7311 Elmwood Ave. Enjoy our PCC charter in cooperation with East Penn Traction Club Meet. Our trolley charter departs from SEPTA Elmwood Depot at 11:00 am and returns around 3:00 pm. Photo stops planned. To reserve tickets, mail payment to Harry Donahue, 103 Mulberry Ct., Morgantown PA 19543. See web site for details. Admission: \$45.00 per person. Contact Bill Monaghan at (856) 297-2355 or visit www.friendsophiladelphiatrolleys.org

ROCKHILL, PENNSYLVANIA, July 15, 2017. PCC and LRV Day at Rockhill Trolley Museum, 430 Meadow St. Join us for a special event highlighting Presidents Conference Committee (PCC) and Light Rail Vehicle (LRV) trolleys! Cars PTC 2743, NJT 6, and MTS 1019 will be running. Trolleys depart every 20 minutes, with carbon tours available throughout the day. See web site for details. Admission: \$8.00. Contact Bill Monaghan at (856) 297-2355 or visit www.rockhilltrolley.org

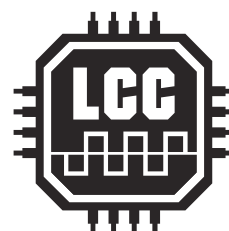
SHAMOKIN, PENNSYLVANIA, May 27, 2017. Anthracite Heritage Express at , Market Street. First train to Mt. Carmel at 11 a.m., second train to Reed Station at 2 p.m. Ride is 90 minute round-trip departing from Market Street. Tour guides on board. Entertainment provided. Sponsored by CEDA-COG Joint Rail Authority, North Shore Railroad, Penn Valley Railroad, and Northumberland County. Admission: \$10.00 per person, child riding on lap free. Contact Jeanne Shaffer at (570) 850-9121 or visit www.nccarts.com

SNOQUALMIE, WASHINGTON, May 27, 2017 - May 29, 2017. Memorial Day Weekend Train Excursions at Northwest Railway Museum, 38625 SE King St. Active duty, guard, reserve, and retired members of the military (with current military I.D.) and their dependent family members enjoy \$5.00 round trip train fares to celebrate Memorial Day Weekend. See web site for details. Admission: \$5.00-20.00.



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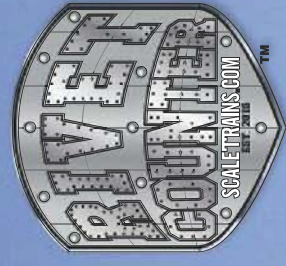
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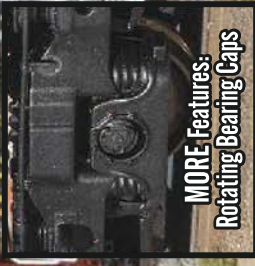
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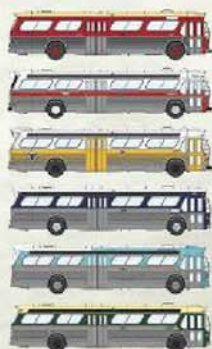
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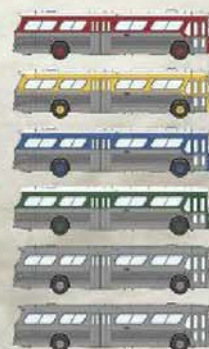
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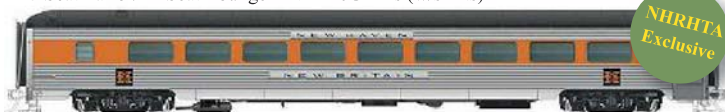
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