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Model Railroader

June 2026

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This scene was inspired by a prototype photo



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- Mont Switzer models a head-end caboose
- Newcomer Dean Deis scratchbuilds a flatcar



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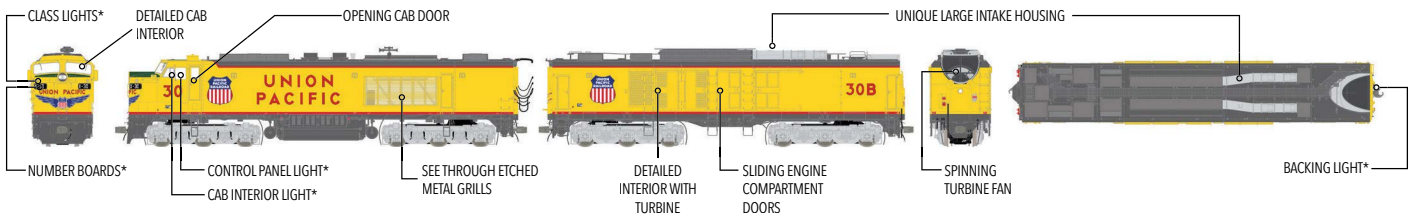
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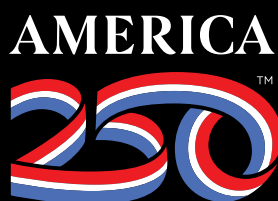
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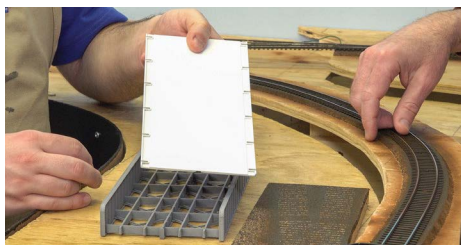


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When do-it-yourself is counterproductive



On the cover: Train 5507 passes through Troy Ledges on Jim Dufour's HO scale Boston & Maine layout.
Randy Laframboise photo



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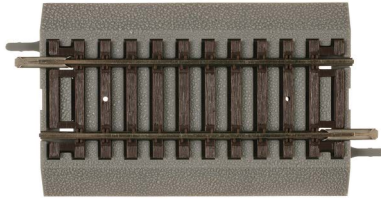
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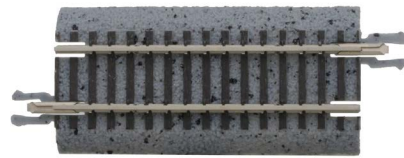


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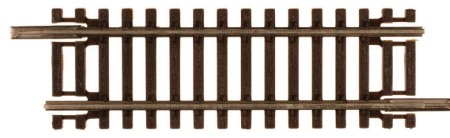
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N SCALE TRACK



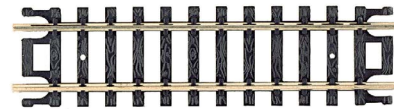
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Cody's Trackside Finds

Cody Grivno is often seen with a camera in his hands. At the office he takes product and process photos for the magazine. When trackside he's recording contemporary railroading, either just for the joy of it or for a potential project.

For several years now, we've been sharing some of these images in Cody's Trackside Finds on Trains.com. In March, he posted an article about an eclectic combination of motive power pulling a train on Canadian National's Waukesha Subdivision. Check out what made him stop and shoot on Trains.com!

Tracking innovation

David Popp, Trains.com director, has been digging into the bound volumes of *Model Railroader* magazine and takes a look at the January 1980 issue.

The magazine featured a review of Con-Cor's new N scale Big Boy, and ads for walkaround analog train control from Trainpower Inc. and Troller. Another ad featured Polly S acrylic paint, which was still innovative in 1980 and would later become Polly Scale. Learn more about the state of the hobby in 1980 in this article on Trains.com.



Saving a favorite project

When we tore down the Milwaukee, Racine & Troy, we salvaged what we could from the layout, including all of the rolling stock and locomotives, many of the structures, and even a few boxes of trees. Everything went into boxes, and some of us saved models we worked on ourselves.

One such model was the tugboat *Kansas*, built by Editor Eric White. The model was named for his mother's birth state, and he wanted to find a way to preserve the model even though he didn't have a layout he could use it on. Read all about how he did that on Trains.com.



N scale
Atlas Model Railroad Co.
EMD GP38-2 diesel locomotive

Video reviews on Trains.com

Every month we post review videos of the locomotive models we feature in the magazine. It's your chance to see and hear these models in action.

Cody Grivno hosts these videos where, in addition to running the models, he points out the features of each locomotive along with some historical information about when the full-sized locomotives were built and in use.

It's also a great way to get another look at some of our project layouts, which become the stage for the models to strut their stuff. See more at Trains.com.



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Celebrating N scale

It's summer time and the convention season has started. The first of the big ones is the N scale national convention right here in Milwaukee, June 23-27.

Last month I wrote about all of the things that will be happening at the National Model Railroad Association National Convention in Chattanooga in July. The N scale event, officially the National N Scale Convention, will offer a similar lineup of activities including clinics, tours, and a train show.

Many new modelers are choosing to start in N scale, and there are lots of good reasons for this. The most obvious is space. No matter how you do it, model railroads take up space, more than most other model-building activities. Though HO scale is the most popular, N scale (at roughly half the size) requires only a quarter of the volume.

That means big city scenes or towering mountains take

up only 25% of the space they do in HO scale. This can be quite a difference!

If you're just starting out in N scale, checking out this convention will give you a big boost in climbing that learning curve. You'll be able to meet with and learn from some of the hobby's experts including Russ Kauffman from The N Scale Architect, a popular producer of structure kits and scratchbuilding supplies, and *Model Railroader* authors Steve Miazga and Keith Kohlmann.

I reached out to one of the organizers, Keith Schmidt, and he pointed out that the Public Train Show is the big event of the weekend.

Shows at specialized events such as this are great for finding items that might not make it to a more general gathering. The show will be Friday, June 26 and Saturday, June 27 at the convention hotel. In addition to manufacturers and swap meet

tables, several local clubs will have layouts on display.

There will also be tours of local layouts, both N scale and larger. Check the website, nationalnscaleconvention.com/natstore/, for more.

Though staff from *Model Railroader* won't be set up at the convention, we do plan to visit and hope to bring a bit of the flavor of the convention to readers and Trains.com Video members after the show.

Of course, the NMRA convention will also have plenty for N scale modelers to see. There will be a chance to operate on a modular N scale layout, as well as view major manufacturers' products.

If you've been toying with the idea of a second layout, finding room for an N scale project shouldn't be too hard. One of the most compact options is T-TRAK, which uses Kato Unitrack as the standard. The modules are 12 x 14 inches with two tracks across the front.



And we have some stories in this issue to consider, including the Phree Lantz & Phanta Zee layout built by Robert Bonham. He's used N scale to his advantage to build spectacular Western scenery and sprawling city and railroad yard scenes.

If you want to see what N scale is all about, be sure to check out this summer's convention offerings.

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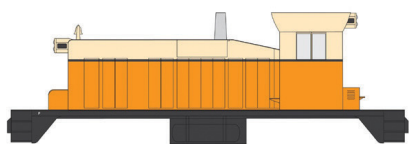
N scale



F40PH-2 diesel locomotive. Rapido Trains offers VIA Rail's four-axle passenger diesel in rebuilt and as-delivered versions. The N scale rebuilt F40PH-2 is decorated in the Renaissance scheme, Love the Way wrap, and \$10 bill scheme. As-delivered models are painted in the original, Canada, Operation Lifesaver, Telus, Kool-Aid, and Home Hardware schemes. The

locomotive features a prototype-specific body and details; working headlights, ditch lights, and number boxes; and factory-installed grab irons and handrails. Direct-current models are priced at **\$159.95**. Versions with an ESU LokSound sound decoder and MoPower capacitor retail for **\$269.95**. Rapido Trains, 905-474-3314, rapidotrains.com

HO scale locomotives



- **Electro-Motive Division SW1 diesel locomotive.** Phase II: Burlington Northern, Great Northern, New York Central, and Pennsylvania RR. Phase III: Boston & Maine, Chicago & North Western, Conrail, Lehigh Valley, Luzerne Susquehanna, Nickel Plate Road, Penn Central, Portland Traction Co., and painted (orange and cream, yellow and black, and solid black) but unlettered. Light-emitting-diode headlights, ground lights, cab lights, and marker lights (where applicable). Direct-current model, \$239.95; with DCC and sound, \$339.95. Bowser Manufacturing Co. Inc., 570-368-2379, bowser-trains.com



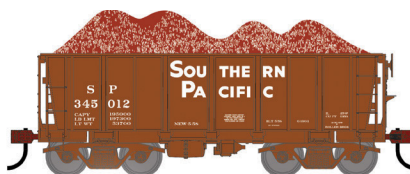
- **General Electric U30CG diesel locomotive.** Atchison, Topeka & Santa Fe (1967+ as-delivered warbonnet, 1970+ warbonnet, 1971+ bookend scheme, 1972+ warbonnet with yellow cigar band, 1976+ warbonnet with blue cigar band, and 1976+ weathered warbonnet [two versions]). One to three road numbers per scheme. Available in passenger and freight configurations. Full lighting package; heavy, die-cast metal frame with separate details; and etched-metal steps. Direct-current model, \$269.95;

with DCC and sound, \$379.95. Add \$10 for weathered schemes. Rapido Trains Inc., 905-474-3314, rapidotrains.com



- **General Electric U33C and U36C diesel-electric locomotives.** U33C: Burlington Northern, Delaware & Hudson, Erie-Lackawanna, Illinois Central, Northern Pacific, Penn Central, Southern Ry. (high short hood), and Southern Pacific. U36C: Atchison, Topeka & Santa Fe; Clinchfield; and National Railways of Mexico. Multiple nose, long hood, and cab variations; metal grab irons and brake chain; and etched-metal steps. Direct-current model, \$249.95; with DCC and sound, \$359.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com

HO scale freight cars



- **Pacific Car & Foundry 26-foot ore car.** Southern Pacific, Bessemer & Lake Erie, Cartier Ry., Conrail, Kaiser Steel, and Vale Inco Ltd. Three four-packs per road name. Wire grab irons, removable plastic ore load, and body-mounted McHenry scale couplers. Four-pack, \$129.99. Athearn Trains, 800-338-4639, athearn.com



- **Trinity 6,221- and 6,241-cubic-foot capacity plastic pellet covered hoppers.** 6221: Sunoco, Exxon-Mobil,

Clarification

In the April 2026 issue I reviewed the ScaleTrains HO Electro-Motive Division SD7 decorated for Great Northern. In the review, I stated that the lettering and stripes should have been yellow. Rich Remiarz, chair of the Great Northern Railway Historical Society Model Development Team, contacted me to let me know the lettering and stripes on Great Northern diesels in the *Empire Builder* scheme were actually Imitation Gold (Dulux 83-50931). He noted that some of the confusion comes from railroad-issued diagrams, where the color was called yellow but the paint spec was for Imitation Gold. Rich added that as the color faded it sometimes looked like a pale yellow, as I saw in prototype images.

Thank you for sharing this information with us, Rich. Paint chips for GN's Pullman Green, Omaha Orange, and Imitation Gold, among other railroad-specific colors, can be found in GNRHS Reference Sheet No. 28.

General American Marks Co., and Trinity Industries Leasing. 6241: Dow Chemical, Equistar Chemicals, General American Marks Co., Ineos Olefins & Polymers, Sasol Chemicals, and SMBC Rail Services. Both body styles also available painted gray with data only. Multiple roof hatch styles and arrangements, etched-metal running boards and crossover platforms, and factory-installed grab irons. Single car, \$64.95; six-pack, \$389.70. Rapido Trains Inc., 905-474-3314, rapidotrains.com



- **Pullman-Standard 3,400-cubic-foot capacity four-bay coal hopper.** Bessemer & Lake Erie (Delivery Cor-Ten Black [1975], Delivery Orange T8 Auto-Flo [2-1976], Delivery Orange T16 Auto-Flo [2-1976], and conspicuity repaint [2005+]). Multiple road numbers per scheme; also available painted black but unlettered. Factory-applied wire grab irons and uncoupling levers, see-through brake step platform, and Kadee scale couplers. \$58.95. Tangent Scale Models, 828-412-3886, tangentscalemodels.com

N scale locomotives



- **Electro-Motive Division GP40 diesel locomotive.** New paint scheme: CPKC. Revised and upgraded tooling with improved body shell details. Separate, factory-applied handrails and air horn; detailed truck sideframes; blackened metal wheels; illuminated number boxes; and directional light-emitting-diode headlights. Performs best on 11.25" radius curves or greater. With dual-mode SoundTraxx Econami sound decoder, \$329. Bachmann Trains, 215-533-1600, bachmanntrains.com



- **2-8-2 Mikado steam locomotive.** Light Mikado: Southern Ry. 4501 (2026 appearance and black boiler), Canadian

O scale



Ronald Reagan boyhood home. Midwest home-improvement chain Menards has added this structure to its lineup of factory-assembled buildings. The O scale model, priced at \$100, is based on the prototype in Dixon, Ill., and features figures of Ronald and Nancy Reagan, a lighted porch with two chairs and hanging plants, a scenicked base with sign, and an illuminated interior. The lighting features require a 4.5V power supply, sold separately. The house measures 8 1/8" x 10" x 7 5/8". Menards, menards.com/trains

National, Central of Georgia 699 (Tennessee Valley Railroad Museum excursion appearance), Chesapeake & Ohio, National Railways of Mexico, Pennsylvania RR, and Union Pacific. Heavy Mikado: Chicago, Burlington & Quincy (Fort Worth & Denver); Milwaukee Road; and New York Central (Pittsburgh & Lake Erie). Both versions also available painted black but unlettered. Die-cast metal body and chassis, factory-applied details, and plastic couplers. Direct-current model with factory-installed speaker, \$299.99; with dual-mode Paragon4 sound decoder, \$399.99. Broadway Limited Imports, 386-673-8900, broadway-limited.com

N scale freight cars



- **Trinity 3281 two-bay covered hopper.** Suntrust Leasing, Arkansas

Oklahoma, Blue Circle Cement, Canadian General Transit, Excel Railcar, First Union Rail, Halliburton, Holcim, LaFarge, Rio Grande Chemicals, and St. Lawrence Cement. Multiple road numbers per scheme. Etched-metal running boards and body-mounted couplers. \$42.95. InterMountain Railway Co., 800-472-2530, intermountain-railway.com

Z scale locomotives



- **Electro-Motive Division SD60M diesel locomotive.** Union Pacific (three road numbers). Prototype-specific details; separate, factory-applied grab irons; AutoLatch couplers; directional light-emitting-diode headlights; blackened metal wheels; and traction tires. Contact manufacturer for pricing information. American Z Line, 614-764-1703, americanzline.com

Remembering Chuck Hitchcock

Chuck Hitchcock, well-known modeler and *Model Railroader* author, passed away on Feb. 14, 2026. He was 89 years old.

Chuck's passion for passenger trains and the Santa Fe fueled his modeling. As a child he had, like many, a Lionel train set which featured the Santa Fe. Subsequent layouts also showcased the Santa Fe, including the passenger-themed Argentine (Kansas) Division; the Argentine Industrial Division (also featuring transfer trains of other railroads); and most recently the Ottawa Junction Ry., a Santa Fe double branchline based on a layout plan from MR.

I first met Chuck at a Santa Fe Modelers Organization national convention in Albuquerque, New Mexico in 1984 [The Santa Fe Modelers Organization was a predecessor to the Santa Fe Railway Historical & Modeling Society — *Ed.*] He became a good friend and mentor to me, imparting many

real-world or life lessons that he had experienced and processed into success.

A model mentor. When my wife, Deborah, and I started looking at places to live after being in Washington, D.C., for 10 years, Kansas City was on our short list because of Chuck and his wife, Jenny. They took the time to squire us around KC and educate us on life there, convincing us it was a good place to live. Must be, as we've lived in the KC area for more than 35 years!

One of Chuck's insights was the value of friends in the model railroading community. He always felt that model railroaders were special people and his friendships with John Allen, Whit Towers, Cliff Robinson, David Barrow, Andy Sperandio, Tony Koester, and several others proved that.



Paul Dolkos photo

A pillar in the community.

Chuck was born in Kansas City, Mo., and spent most of his life there, except for a few years in Denver after graduating from the University of Kansas in Lawrence.

Growing up in Kansas City, Chuck used to help out his dad, who owned a gas station/auto repair shop in the Rosedale (Kansas) section of

KC. There he saw the evening passenger trains headed west from Union Station.

Chuck had spent the last few years dealing with the effects of dementia, and had received a diagnosis of leukemia only about a month ago. He passed while in hospice, surrounded by family. He's survived by his wife, Jenny, son Doug, and daughter Megan. His other daughter, Sara, passed away in 2014. Chuck was a special guy and I'm going to miss him, so will the hobby.

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Broadway Limited N GE ES44AC

Broadway Limited Imports has released a new run of its N scale General Electric ES44AC diesel locomotive. The paint schemes this time around are ones the manufacturer hasn't offered before, including anniversary and heritage units, many of which can be found on the rails today.

General Electric introduced the ES44AC in the early 2000s. The designation means Evolution Series, 4,400 horsepower, Alternating Current. The six-axle road locomotive has a GEVO-12 diesel engine that's more fuel efficient and produces less emissions than GE's former FDL engines, helping the road unit meet environmental regulations.

The sample we received is decorated as BNSF Ry. 6017, part of the railroad's 5844 through 6238 series. The locomotive was built by GE in June 2006 under order number 1900. The six-axle unit was delivered in the Heritage III scheme, which debuted in 2005 when the railroad re-branded from Burlington Northern Santa Fe to BNSF Ry.

In August 2020 the 6017 was one of 10 locomotives repainted in a special scheme to commemorate BNSF Ry.'s 25th anniversary.

The N scale ES44AC has an ABS body and a die-cast metal chassis. The handrails and stanchions are flexible engineering plastic, black on the sides and yellow on the ends. The vertical handrails in the stepwells should be white.

The six-axle unit has a mix of molded and separate, factory-applied details. Molded items include the grab irons on front of the cab, the uncoupling levers on both pilots, and windshield wipers.

Freestanding parts include the brake wheel on the fireman's side of the long hood, the snow plow on the front pilot, three-cluster m.u. hoses on both pilots, a GPS dome on top of the cab, and a die-cast metal five-chime air horn in front of the exhaust stack. The grab irons on top of the nose and at the rear of the long hood are formed wire.

Our review sample is neatly painted in the orange, black, and yellow 25th anniversary paint scheme. Prototype drawings of the GE ES44AC were published in the November 2004 *Model Railroader*. Most of the dimensions match or are within scale inches of published data. The distance between the truck centers measured 45'-0" on the model compared to 46'-3" on the prototype. Shortening the wheelbase can help larger models negotiate tighter curves. Broadway Limited's ES44AC has a minimum operating radius of 9".

There are some detail differences between the model and BNSF Ry. 6017. The door on the nose is to the left of the headlights, but should be on the opposite side. The size and arrangement of the radiator grills, along with the position of the rear headlight and sand filler hatch, are also different. However, the model's detail package is accurate for other road names offered by BLI in this run.

For workbench testing I used an NCE Power Cab. At speed step 1, the BLI model moved at 3 scale mph. The six-axle road locomotive achieved a top speed of 89 smph. The prototype locomotive has a top speed of 73 mph.

Next, I took the ES44AC over to our Milwaukee, Racine & Troy State Line Route to see how it performed in an

operating layout environment. The model railroad features a Digitrax DCS-210+ DCC system. The locomotive comfortably pulled an 19 car train on the main line and worked the quarry. The unit had no trouble with the layout's No. 6 turnouts and 18" radius curves.

If your N scale model railroad is set in the modern era, then you'll want to check out the latest run of GE ES44AC diesel locomotives from Broadway Limited Imports. The six-axle road units will look good leading freight trains and office car specials on your model railroad. — *Cody Grivno, senior editor*

Facts & features

Price: Direct-current model, \$199.99; with Paragon4 sound decoder, \$279.99

Manufacturer

Broadway Limited Imports
9 East Tower Circle
Ormond Beach, FL 32174
broadway-limited.com

Era: 2020 to present (as decorated)

Road names: BNSF Ry. (25th anniversary), CSX (Atlantic Coast Line, Chesapeake & Ohio, and Chessie System heritage units), Florida East Coast (Grupo Mexico scheme), Iowa Interstate (30th anniversary "Rock Island" scheme), and Union Pacific (5,000th GEVO scheme). One to two numbers per road name.

Features

- Body-mounted couplers, at correct height
- Metal wheel stubs mounted on plastic drive axle gears, properly gauged
- Weight: 3.4 ounces



Walthers HO ACF-design covered hopper

An American Car & Foundry-design 1,958-cubic-foot capacity two-bay covered hopper is the latest car to join the WalthersMainline series. The newly-tooled HO scale model has 33" metal wheels on plastic axles and body-mounted Proto-Max metal couplers.

American Car & Foundry introduced the 1958 two-bay covered hopper in the late 1930s. Between 1940 and the early 1960s, other carbuilders, along with various railroad shops, built cars similar to the ACF design. The covered hoppers were used to transport dry, bulk materials such as cement, powdered chemicals, and sugar, among other commodities.

The sample we received is decorated as Atchison, Topeka & Santa Fe No. 182045. The full-size car, part of the railroad's 182010 through 182059 series, was built by General American Transportation Corp. in 1940. The 70-ton car was assigned to Santa Fe's GA-52 class and used in cement service. Cars from this series were listed in the *Official Railway Equipment Register* into the mid-1980s.

The Walthers covered hopper has a one-piece body. Molded details include the grab irons, stirrup steps, and brake housing. A plastic Ajax brake wheel, see-through brake platform, and sill-mounted train air line on the right side of the car are factory applied.

On the roof, the model has eight free-standing hatch covers. Drill starter points are included for adding handles. The locking bars are freestanding parts. A one-piece, see-through running board runs between the hatches.

The underbody is a multi-piece assembly. The hopper bays and bottom

half of the slope sheets are a one-piece plastic casting. Tabs (two per side) fit into slots on the interior of the carbody. Metal weights, secured with glue and screws, fit neatly in the bays. The upper half of the slope sheets and the vertical bracing are separate pieces.

The center sills, body bolsters, draft-gear boxes, and end braces are a single molding secured from inside the car with a pair of Phillips-head screws. An air reservoir, brake cylinder and lever, control valve, and related piping are attached to the B end of the car.

Our review sample is neatly painted mineral brown. Graphic placement follows prototype images of other GA-52 covered hoppers published in *Santa Fe Open-Top Cars: Flat, Gondola and Hopper Cars 1902-1959* by Richard H. Hendrickson (Santa Fe Railway Historical and Modeling Society Inc., 2009).

The covered hopper features Santa Fe's circle-cross herald inside a black square. The herald has the bold Santa Fe lettering that was introduced in 1958, but the as-delivered car should have the earlier, thinner lettering.

A top-down view of a car from this Santa Fe series was published in Volume 28 of the *Railway Prototype Cyclopedia*. The roof, hatch covers, and locking bars don't match this group of 50 ATSF cars. Erie, Halliburton, and Kosmos Portland Cement Co. cars had locking bars with one arm per hatch cover.

Prototype drawings of the ACF-design 1958 covered hopper were published Volume 27 of the *Railway Prototype Cyclopedia*. The Walthers model matches published dimensions of an ACF-built car.

For real-world testing, I put the covered hopper in a train on our Winston-Salem Southbound layout. The model railroad has a mix of commercial and handlaid track and turnouts, a 30-degree crossing, and a No. 4 turnout. The model performed without issue while being pushed and pulled in a train.

The WalthersMainline HO ACF-design covered hopper features a nice mix of molded and freestanding parts. The short-wheelbase car is ideal for layouts set between the 1940s and 1980s.

— *Cody Grivno, senior editor*

Facts & features

Price: \$39.98

Manufacturer

Wm. K. Walthers Inc.

5601 W. Florist Ave.

Milwaukee, WI 53218

walthers.com

Era: 1940 to mid-1980s

Road names: Atchison, Topeka & Santa Fe; Ann Arbor; Chicago & North Western; Denver & Rio Grande Western; Erie; Halliburton; Kosmos Portland Cement Co.; and Southern Ry. Three road numbers per scheme. Also available painted gray with data only and undecorated.

Features

- 33" metal wheels on plastic axles, correctly gauged
- Body-mounted Proto-Max metal couplers, at correct height
- Minimum radius, 18"
- Weight: 3.6 ounces, .2 ounce too heavy per National Model Railroad Association Recommended Practice 20.1



Atlas N Gunderson cryogenic reefer

A Gunderson cryogenic refrigerator car is the latest addition to the Master Line from Atlas Model Railroad Co. The N scale car is based on tooling that the New Jersey-based manufacturer acquired from Wm. K. Walther Inc. in June 2018. But this isn't just a rehash of the ready-to-run car from the mid-1990s. The reefer has received upgrades that bring it more in line with contemporary models.

Gunderson introduced the prototype cryogenic reefer in 1990. The car, designed for transporting frozen food, provided an alternative to the traditional reefer. Instead of relying on mechanical refrigeration, cryogenic cars were cooled using charges of frozen carbon dioxide. Jeff Wilson noted in *Modern Freight Cars* (Kalmbach Media, 2019) that “a 15-ton charge of CO₂ kept a car's interior below zero for two weeks.”

Near the end of the 1990s, carbon dioxide prices began to climb, making this method of cooling cars uneconomical. “Through 2001, the cars were all converted with end-mounted mechanical refrigeration units added,” Wilson wrote. “Most remain in service in the Cryo-Trans fleet.”

Our review sample is decorated as Cryo-Trans 1337, part of the CRYX 1273 through 1342 series built by Gunderson under Lot 19370 in April and May 1991.

The Atlas model has a one-piece plastic body with molded stirrup steps, side and end ladders, and placard and route boards. The car has a diagonal-panel roof and non-terminating ends.

Molded piping is located on the A end of the car, between the first and second corrugations. On full-size cars this was

used to add the CO₂. A door, used for venting on the prototype, is located next to the brake wheel on the B end.

I found a color picture in the July 1994 MR showing the then-new N scale cryogenic reefers when they were produced under the Walther banner. One noticeable feature on the ready-to-run cars was Rapido-style couplers.

Since acquiring the tooling, Atlas has made upgrades to the model. Examples include knuckle couplers; see-through, etched-metal crossover platforms; and an improved brake wheel.

The model has a separate plastic underbody with molded stringers, center sills, crossmembers, and draft-gear boxes. Atlas used Accumate body-mounted plastic knuckle couplers with factory-installed trip pins on the model. The draft-gear box covers are secured with a Phillips-head screw.

Much of the underbody is hidden by the sills, so the brake system is pretty basic. Molded details include the air reservoir, brake cylinder, and control valve. There are no rods, pipes, or levers.

The sample we received is neatly painted in the white and orange Cryo-Trans scheme. Graphic placement follows prototype images that I found online and in print. Except for the tiny lettering in the warning labels, all of the data is legible under magnification.

Following the prototype, these CRYX cars have different names on the door. Our sample is SUN VALLEY. Cars from the 1273 through 1342 series were named after towns, lakes and rivers, and geographic features.

Prototype drawings of the cryogenic reefer were published in the 1997 edition of *The Car and Locomotive Cyclopedia of*

American Practices (Simmons-Boardman Books Inc.). The Atlas model closely follows the dimensions listed.

I put the Atlas model in a freight train on our Milwaukee, Racine & Troy State Line Route layout, which has 18" minimum radius curves and No. 6 turnouts. The model ran smoothly while being pushed and pulled. At 5¼" long, the cryogenic reefer will look and perform better on broad-radius curves.

If you're an N scaler modeling the 1990s, you'll want to take a look at the Atlas Gunderson cryogenic refrigerator car and see the upgrades for yourself. The long, boxy car will certainly stand out in a freight train. — *Cody Grivno, senior editor*

Facts & features

Price: \$34.95 (undecorated, \$29.95)

Manufacturer

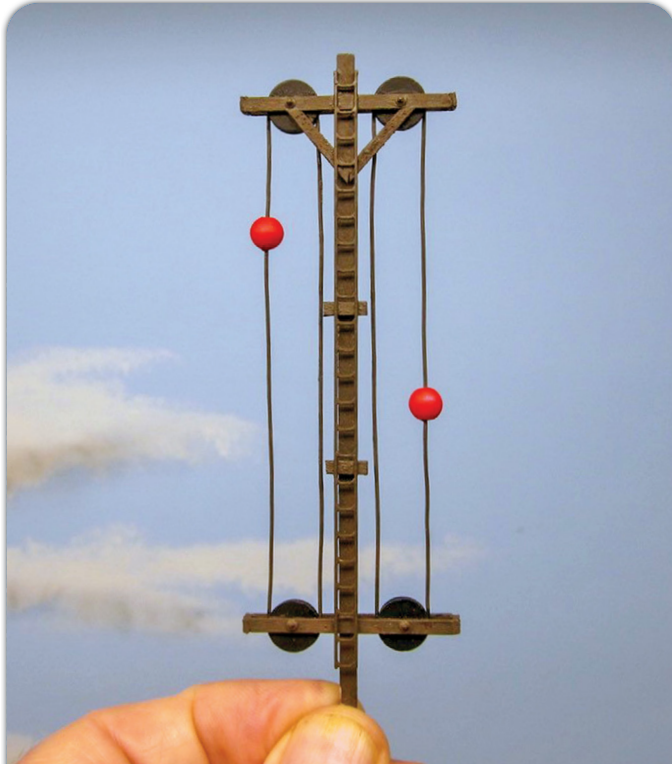
Atlas Model Railroad Co.
378 Florence Ave.
Hillside, NJ 07205
shop.atlasrr.com

Era: April 1991 to present (as decorated)

Road names: Cryo-Trans (orange and white, Cornerstone Systems, and ex-Lamb Weston), GATX Arcticar, JR Simplot, and Lamb Weston. Three to six road numbers per paint scheme; also available undecorated.

Features

- 36" plastic wheelsets, in gauge
- Body-mounted Accumate couplers, at correct height
- Weight: 1.4 ounces, .1 ounce too light per National Model Railroad Association Recommended Practice 20.1



Mike Tylick's ball signal article inspired Dave MacPherson to build his own. Dave MacPherson photo

Having a ball

I enjoyed Mike Tylick's article on building a ball signal in the September 2025 issue. As a result, the Clinch Mountain Railway Preservation Society decided to fund the rebuilding of this last ball signal on the line, and relocate it near the Crawford depot. Although BEST Models makes a suitable HO kit, I decided to scratchbuild a freelance model and this is the result.

Since I could not find appropriate commercial parts, the original pulleys had to be replaced. The pulleys on the model were made with two outer washers and a hand-made inner washer of a smaller diameter for the rope to fit into the groove. For the ropes I used .025" diameter solder, which I hardened and straightened by holding one end in a vise and the other end in a pair of pliers, pulling slowly and gently stretching the solder. Caution, too much stretching could break the solder.

I used Crazy Glue Gel as an adhesive, and Grandt Line nut-bolt-washers for added detail, along with a piece of brass signal ladder stock. The pulleys were painted with Polly Scale Engine Black, and everything else was painted with Polly Scale Roof Brown.

*Dave MacPherson
East Bridgewater, Mass.*

Alternative stain choices

Regarding the Ask MR March 2026 question about wood stains, I would suggest a product called TransTint by General Finishes (transtintdyes.com) of East Troy, Wis.

I use Reddish Brown and Dark Walnut. The dyes can be thinned with water or alcohol (I use alcohol), they dry quickly, and using various ratios of the two allows one to make any wood tone desired.

They come in small plastic bottles and they are VERY concentrated, so a drop in dilutant will go very far.

Also, DO NOT let the dye touch anything other than your project, especially your skin. If you get the dye on your fingers, it will be there for a LONG time.

Wear rubber gloves!

*Neil A. Thoman DMD
via email*

More wood pallet tricks

Just read another great issue of MR!

John D. Winter's article "Realistic Wood Pallets" [March 2025 — Ed.] was very helpful, and such a great detail.

I use wood veneer business cards (pack of 50) from Lee Valley Tools to make my plywood bundles. I think these could also work well for John's wood pallets.

*David Bellamy
Caledon, Ontario, Canada*

You just have to ask

The Greater Nickel Plate was dismantled and boxed awaiting shipment to our new home in February. While visiting the community to see the progress being made, we had dinner at the local restaurant and met some of the other residents. Casual conversation revealed backgrounds and other information to form new friendships. It was then that the great light bulb went off in my head.

One of the residents talked about the lighting in the space he had for his art studio. WOW! This guy is an artist; and I've got a blank backdrop for my railroad. The more I thought about it, I realized that we all can do many things. However, most of us are really good at only one or two. There must be others who are better at wiring, track laying, airbrushing, and more than I am. I really like to do small details in scenery; that's my schtick.

All you have to do is ask. Given the chance to work on building a new layout might just be the thing someone would be glad to help you out with. There are tons of articles available covering everything so you can do it yourself. However, while learning a new skill is great, why not learn from someone who is already good at it? All you have to do is ask.

*David Calhoun
Lebanon, Pa.*

Comments, suggestions, and additional information on *Model Railroader* articles and departments are welcome in this column. Every comment will be read, but not all can be printed or answered. Make your statement in 300 words or less, and send it to **Railway Post Office, Model Railroader magazine, 18650 W. Corporate Dr., Ste. 103, Brookfield, WI 53045**, or email editor@modelrailroader.com. Please include your name, city, and state.

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Model Railroader Editor Eric White explained how to install a Walthers Layout Control System switch machine in the September 2018 issue. Bill Zuback photo

Selecting turnout controllers

Q I'm trying to decide on which turnout controller to use on my HO scale railroad. I've looked at the Tortoise by Circuitron and the Walthers Layout Control System. I like Walthers products, but it seems to me the Tortoise would be better for my application. What I need is something to power my frogs and do it from my train control area. It seems that the Walthers product has too many contacts on it which will make it more complicated. I've checked out the wiring diagrams and that is why I thought Tortoise would be better. I need to power 14 turnouts and I don't want to make the wrong choice. Any thoughts?

Rick Buehrer

A Contributing Editor Larry Puckett replied: Rick, you have already done what I would have suggested by downloading the product literature to see which might be better suited for your needs. I have used Tortoise by Circuitron switch motors for almost 30 years and have found them very reliable. The only issue I have run into is that after about 7-10 years the small bronze internal wipers tend to fail and require repair. I have a video on my YouTube channel (Model Railroad-ing with the DCC Guy) showing this process. I have been told that the manufacturer, Circuitron, sells replacement parts for this purpose or you can try my fix. The switch motors have a 9-year warranty, as long as you do not open them and have the original sales receipt. They also make a DCC version, the Smail, with a built-in accessory decoder.

The Walthers devices are a more recent design and as you may have noticed have more features than the Tortoise. This may be why they appear more complicated. In addition to a built-in DCC accessory decoder, they have a single-pole double-throw switch on each side that can be used for powering frogs, signals, and other items. *Model Railroader* Editor Eric White wrote a step-by-step article in the September 2018 issue showing how to install and wire the Walthers switch machines using its installation kit, wires, and push buttons. This issue is available online as part of the *Model Railroader* archive. Back issues may be available at train shows or used book sellers [The issue is sold out at shop.trains.com. — Ed.]

Tortoises and Smail only require about 20 milliamps to operate so you can power about 50 turnouts with a 1 amp power supply. The Walthers devices can be powered with 10-18V DC or you may connect them to your DCC power bus. In either case I would install a separate accessory power bus for switch machines and other devices.

I think you will find that the main difference between these products is that the Walthers devices are more of a plug-and-play product line with all the separate components for installation, wiring, and control available as part of a system. With the Tortoises and Smails you may have to source some individual components.

Q I have what may be an older Accurail HO scale kit. The couplers and trucks come with plastic plugs. Are these a secure press fit into the corresponding sockets? Should they be glued (not good for future maintenance), or replaced with 2-56 screws?

Jonathan Yost

A You are correct, Jonathan. The model you have is an older Accurail kit. Some of the manufacturer's early offerings featured press-fit draft-gear box covers and mounting pins for the trucks. However, these press-fit parts could work loose over time. Gluing the press-fit parts in place will work, but it will make it difficult if you need to maintain or replace the couplers or trucks.

Fortunately, in most cases the press-fit covers can easily be converted to screw-mounted. Here's an example using the company's American Car & Foundry 4,600-cubic-foot capacity Center Flow covered hopper kit. First, I cut off the mounting pin on both covers. Then, using the dimple on the outside of the cover as a guide, I drill No. 43 clearance hole in both draft-gear box covers.

I'm a fan of Accurail kits and have some of the newer versions of the three-bay Center Flow kit with screw-mounted draft-gear box covers. If you're not comfortable drilling the holes freehand, use one of the new covers as a guide. Make sure you align the lids properly (there is a right way and wrong way). I use the



To convert Accurail's HO scale press-fit draft-gear box covers to screw-mount, first cut off the mounting pin with sprue cutters. Then drill a screw clearance hole in the cover with a No. 43 bit in a pin vise. Cody Grivno photo

Send questions on model, prototype, and toy trains to AskTrains@Trains.com.



This HO scale Union Pacific American Car & Foundry 48-seat diner from Wm. K. Walther's Inc. features stainless steel panels and kick plates by the doors to the kitchen. On full-size diners these panels and plates protected the car from being damaged by the carts used to restock the kitchen. Image used with permission from Wm. K. Walther's Inc.

sprue nub on the inside of the lid as a match mark. A couple of pieces of double-sided tape will hold the parts together for drilling.

After I drill the holes in the plastic covers, I secure them to the model with 2-56 x 3/16" pan head machine screws (available from Accurail). You can tap the holes if you'd like. However, I've found the plastic Accurail uses is soft enough that you can skip this step.

Similarly, I replace the pins for mounting the trucks with 2-56 x 3/16" screws. No modification work is needed before installing the screws.

Note that you may still find the mounting pins for the trucks in some current Accurail kits. I cut them off and save them. Paint them a rusty color and put them in a scrap pile or gondola load. Or spray them an appropriate color and use them as a roof or wall vent.

Q I noticed on the 48-seat Union Pacific diner that there is one door near the end of the car that is painted silver while all the other doors are yellow. Why? Was this where food and supplies were loaded into the kitchen?

JPD, via the MR Forums

A The silver paint found on models of Union Pacific's 48-seat diner, such as the American Car & Foundry 85-foot car shown above, is meant to simulate the stainless steel panels and kick plates found on full-size cars. Yes, the doors are where food and supplies were loaded into the car. Members of the kitchen staff would also use these doors.

The stainless steel panels prevented the doors from getting scratched and dented by the carts used to restock the kitchen. You can also simulate the panels with Stainless Steel Trim Film (TF-27) from Microscale Decals.

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Q I've decided to model in N scale and it seems the consensus is Micro-Trains couplers are the most popular and reliable. However, I can't find items like their coupler height gauge anywhere! Amazon, eBay, and online hobby stores are all out of stock. Is Micro-Trains still in business? Should I switch to HO scale instead?

Dennis Strauch

A Thanks for writing in, Dennis. Atlas Model Railroad Co. acquired Micro-Trains Line Co. in November 2025. You can learn more about the details of the sale on Trains.com and on page 10 of the February 2026 issue of MR.

When sales like this take place, some modelers rush out and purchase items from the brand that was sold, which may explain why you're having a hard time finding the N scale coupler height gauge at the moment. A friend who owns a hobby shop said there was a noticeable increase in sales of Micro-Trains Line Co. items after the news of Atlas Model Railroad Co. acquisition was announced.

But this news doesn't mean you need to switch modeling scales. A press release issued at the time of the sale stated, "The production of Micro-Trains products will transition to Atlas' global manufacturing and supply network. 'Micro-Trains by Atlas' is set to resume production in 2026 following a brief transition period."

I contacted a representative from Atlas Model Railroad Co. to learn more about the status of the N scale coupler height gauge moving forward. He said that Atlas intends to produce all Micro-Trains Line Co. items, but it is too early to give specific timelines.

Q My grandpa boarded a Union Pacific troop train in Salt Lake City in 1944 and traveled from there to Camp Hood, Texas. I know he stopped in Newton, Kan. Can you tell me what you think the most likely route would have been from Salt Lake to Killeen, Texas, with a stop in Newton?

Katie Morgan

A I turned to Jerry Dzedzic, our former On Operation columnist, to assist with this question. Here's what he learned:

Had the question come 20 years ago, experts with first-hand experience could have weighed in. Instead, Jim Singer and Keith Jordan, both very knowledgeable, collaborated with me on this interesting question. Union Pacific from Salt Lake City to Denver via Cheyenne, Wyo., is almost a sure thing. Handing off the train to the Atchison, Topeka & Santa Fe in Denver is a good bet. The Santa Fe would route it to Newton, Kan., through La Junta, Colo. There, the train would continue through Wichita, Kan., and Fort Worth, Texas, to Camp Hood in Killeen, Texas.

We shouldn't rule out a more round-about route running east over UP's Kansas Pacific line from Denver to Salina, Kan., and McPherson, Kan., then Missouri Pacific to Newton. And it's possible wartime exigencies sent the train all the way to Kansas City, Kan., then to backtrack to Newton over the Santa Fe. **MIR**

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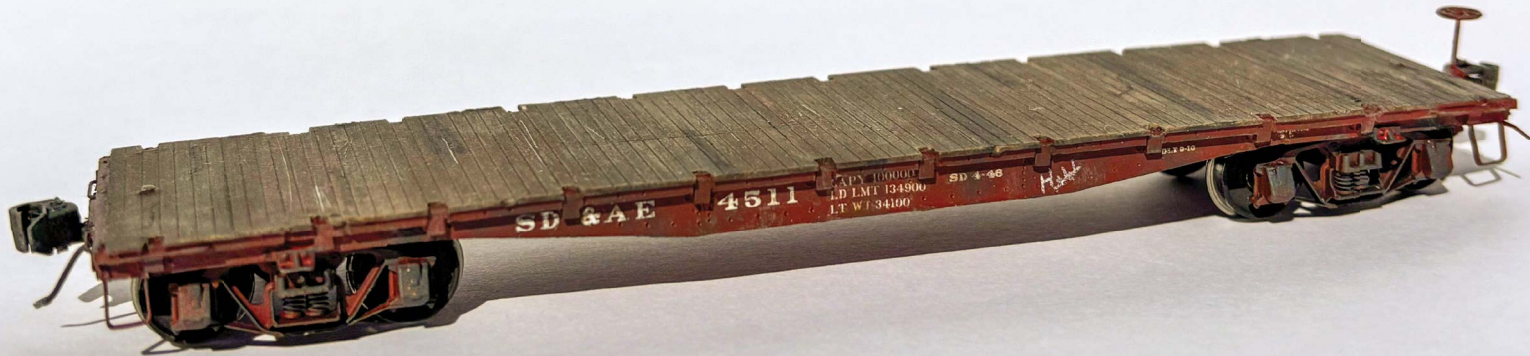
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Getting started in scratchbuilding



Dean Deis scratchbuilt three HO scale flatcars based on San Diego & Arizona Eastern prototypes. Follow along as he shares tips and techniques you can use on your next freight car scratchbuilding project. Photos by the author

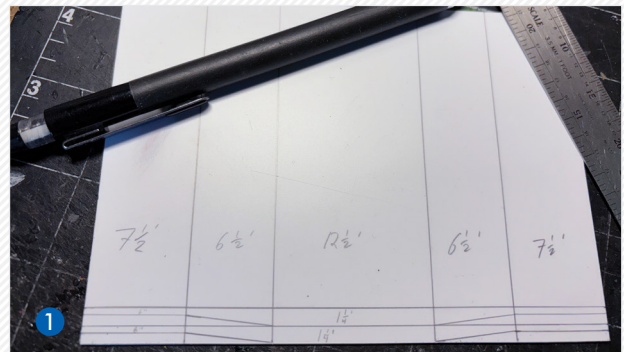
Recently I've taken a strong interest in a local southern California short line, the San Diego & Arizona Eastern. As its name suggests, the line ran east from San Diego through the Laguna Mountains to a connection with the Southern Pacific at El Centro, Calif. The San Diego & Arizona Eastern (SD&AE) was the brainchild of San Diego business tycoon John D. Spreckels. Faced with economic challenges in the 1930s, the SD&AE became a wholly owned subsidiary of the Southern Pacific. A far more thorough company history is available online via simple web searches and in Robert M. Hanft's *San Diego and Arizona: The Impossible Railroad* (Trans-Anglo Books, 1984).

Though the SD&AE never owned much rolling stock (and far less of it survived into the early 1950s, my modeling era), in 1934 the railroad received 25 50-ton flatcars believed to be built by Ralston in 1909-1910 per information in Anthony Thompson's *Southern Pacific Freight Cars: Automobile Cars and Flatcars* (Signature Press, 2004). These flatcars were similar — but not identical — to SP's early Harriman steel flatcars, also sporting fish-belly side sills, 12 side stake pockets, and L-section Andrews trucks.

Having not previously scratchbuilt any rolling stock, these flatcars seemed an appropriate place to start. It's not the aim of this article to provide instructions for making one of these cars for yourself, as I doubt there are many (any?) modelers out there in need of SD&AE flatcars. Instead, I hope this article will encourage others to expand their modeling skills and take on similar projects of their own, perhaps learning something from the techniques outlined here.

Dean Deis is from Granada Hills, Calif. He enjoys modeling the Atchison, Topeka & Santa Fe and Southern Pacific in the early 1950s. Dean's HO scale Atchison, Topeka & Santa Fe 4th Street Spur, a 1'-6" x 8'-0" shelf layout set in downtown Los Angeles in the early 1950s, was featured in the May 2024 issue of Model Railroader magazine.

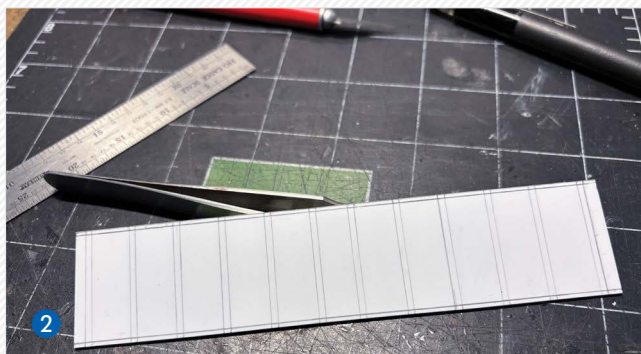
STEP 1 GETTING STARTED



Unfortunately, the SD&AE made no attempts at updating its roster of maintenance-of-way equipment after the Southern Pacific takeover in the 1930s. Luckily, however, several excellent photographs of these flatcars and other SD&AE maintenance-of-way equipment were taken within my modeling time frame and published in Ken Harrison's *Southern Pacific Maintenance of Way Equipment* (Southern Pacific Historical & Technical Society, 2022).

In addition, a copy of the *Official Railway Equipment Register* (ORER) from 1950 shows three of the original 25 SD&AE flatcars were still in revenue service. The ORER is an often-overlooked modeling reference. What makes it so valuable? Well, among other things is its listing of interior and exterior dimensions of revenue freight cars. Though photographs can provide a sense of the basic footprint, knowing the exact dimensions is crucial for building an accurate scale replica. The ORER indicated that the exterior length of these cars was 42'-0" long x 9'-4" wide. The flatcar's deck sat at 3'-9" above the railhead.

STEP 1 GETTING STARTED (CONT'D)

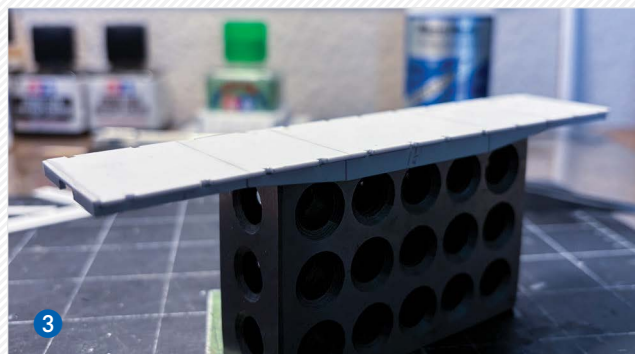


2

Armed with these dimensions, I began work on the flatcar's frame. I started with the most noticeable feature, the fish-belly sills, and drew them out on a piece of .040" sheet styrene ①, opposite. The only dimension given is the length; the rest can be determined by educated guess.

Then I carefully cut out the side sills and end sills from styrene using a utility knife. I sanded the pieces to ensure each side and end sill is an exact duplicate of its corresponding piece.

Next, I turned my attention to the flatcar's subdeck, also made from .040" styrene sheet. The subdeck is a

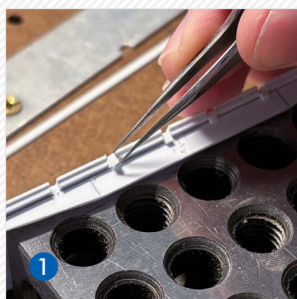


3

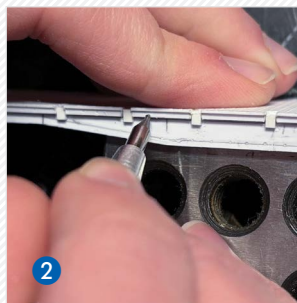
rectangle of the basic dimensions of the car and is what the side and end sills will be glued to. First, I marked out the stake pocket locations, ensuring equal distance between stake pockets and that said pockets were parallel to their counterpart on the other side ②.

I then notched each pocket with a No. 11 blade in a hobby knife, removing material only to the horizontal line penciled $\frac{1}{16}$ " inboard of the sides, which is where the side sills would be attached. I finished this part of the project by gluing the side sills, end sills, and subdeck to form the basic frame of the car ③.

STEP 2 DECK AND STAKE POCKETS



1



2

Next, I attached the most visible piece of the car, the deck. Keeping with the all-styrene construction, I used Evergreen V-groove sheet styrene (2060). I cut the deck to overhang the sides by about $\frac{1}{32}$ ". Once the deck was attached, I cut notches for the stake pockets, using those in the subdeck as a guide.

I then added the stake pockets, which I made from .040" x .060" styrene strip ①. Though solid styrene strip may seem a crude method for fashioning stake pockets, the fact that they're not hollow isn't very noticeable.

I then took a carbide scribe and added dimples to the sides to simulate rivets ②. This isn't a scientific process and is by no means perfect. However, the suggestion of rivets adds to the model and gives some needed depth to the flat styrene. I used photographs to replicate, as best I could, the arrangement of the rivets. Pencil marks on the side sills helped me keep them aligned.

Materials list

A-Line

11004 2-56 x $\frac{1}{8}$ " Phillips head screws
29000 Style A stirrup steps

Detail Associates

2504 .012"-diameter round brass wire

Evergreen styrene

143 .040" x .060" strip
175 .100" x .100" strip
2060 V-groove siding
9040 .040" sheet
9100 .100" sheet

Harbor Freight

67225 $\frac{1}{4}$ ounce wheel weights

Kadee

144 short, underset-shank couplers
553 Andrews 1898 self-centering trucks

Owl Mountain Models

1010 SP Common Standard roping staple

StarBrand paint

STR-30 SP/UP Freight Car Red

Tamiya

85080 TS-80 Flat Clear
87131 Panel Line Accent Color Black
87140 Panel Line Accent Color Dark Brown
87064 Fine Surface Primer Light Gray

Tichy Train Group

3013 AB brake set

Vallejo acrylic paint

70.862 Black Grey
70.874 Tan Earth
70.941 Burnt Umber
70.986 Deck Tan
70.990 Light Gray

Yarmouth Model Works

405 Carmer uncoupling levers

STEP 3 WEIGHTS AND DETAILS



I kept the underbody of the flatcar pretty basic. I attached three ¼ ounce Harbor Freight wheel weights to the underside of the subdeck, hidden from view by the fish-belly side sills ①. Though ¾ ounces is significantly below National Model Railroad Association Recommended Practice 20.1, which would dictate a car of this length to weigh around 4 ounces, the weights are positioned to give the car the lowest possible center of gravity and allow for reliable operation while running empty.

The Kadee metal trucks, which also add some weight, ride on .100" x .100" styrene strip bolsters. The styrene also helps stiffen the car. Any space for brake rigging was occupied by the stick-on weights. That was OK with me, as most of the brake hardware would be shielded from view by the side sills. To give the illusion there's a more detailed

brake system, I added .012" brass wire to simulate brake rods running to the trucks and handbrake, also visible in ①.

Before I primed the flatcar, I distressed the styrene deck. I added wood grain detail by sanding the deck. Then I added wear to individual boards. Scratching, deepening grooves, and notching boards with a hobby blade made the styrene look like decades-worn wood ②.

The last step prior to painting was adding details. I bent the grab irons from .012" brass wire. The metal stirrup steps are from A-Line, the etched-metal Carmer uncoupling levers are by Yarmouth Model Works, the brake wheel and handbrake are Tichy Train Group offerings, and the cast-brass Harriman standard roping staples are from Owl Mountain Models ③.

STEP 4 PAINT AND DECALS



I primed the flatcar with Tamiya Fine Surface Primer Light Gray. Then I used an airbrush to spray the car and trucks with StarBrand SP/UP Freight Car Red.

I hand-painted the deck, starting with an acrylic wash of neutral gray. Once that had dried, I added more washes using mixtures of light and dark gray, tan, brown, and black. When working with acrylic washes it's important to give each layer sufficient time to dry. Subsequent layers can easily lift up previous coats.

Once I was happy with the basic look and allowed everything to dry, I drybrushed the tops of the boards with Vallejo's Deck Tan (70.986). Finally, I applied Tamiya Dark Brown and Black Panel Liner to some of the deeper

gouges in the deck. I held the car at an angle to allow the enamel paint to flow through the crevices ①.

There are no commercial SD&AE decals, so I designed my own using the Southern Pacific Railroad Roman font digitally purchased from railfonts.com. The decals turned out excellent and were a far better choice than attempting to cobble together lettering from various sets. Of the three cars I built, two are in maintenance-of-way service. Car MW 1202 is designated a Roadway Flat, a generic term for cars principally used to haul material from store houses to section gangs and between work sites ②.

The other, MW 1082C, is modeled as pictured in Harrison's book with a ragtag sideboard assembly, hauling

STEP 4 PAINT AND DECALS (CONT'D)



about a half carload of ties and some other miscellaneous materials. The stakes, sideboards, and ties were all modeled with scale lumber and attached after the car had been painted and decaled 3. Given the letter suffix, MW 1082C is assigned as a relief tender to crane 1082.

Car 4511 was one of the three cars listed in the 1950 ORER, indicating it was still in revenue service. Some cars

of this class received AB brakes, and the Andrews L-section trucks weren't banned from interchange until Jan. 1, 1954. It's plausible that the 4511 and its two sister cars wandered off the SD&AE in the early 1950s, perhaps with some short-haul loads to Los Angeles, Phoenix, or Tucson via the SP's Sunset Route. The 4511 would also be a likely subject for company service should the need arise. MR

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A Canadian National train crosses the Mukwonago River and the Milwaukee, Racine & Troy's branch line on the east end of *Model Railroader's* latest HO scale project railroad. Cody Grivno photo

EAST TROY INDUSTRIAL PARK BUILDING BRIDGES

Part 6: Using plastic kits to make realistic bridges for our HO scale project railroad

By David Popp // Photos by the MR staff

Bridges are one of the more impressive features found on a model railroad layout. Prototype railroads use bridges large and small to cross everything from simple streams to massive canyons. While there are no canyons to speak of on our East Troy Industrial Park HO scale project, surprisingly we still needed three mid-sized bridges in a rather compact space on the east end of the

railroad. Here, the Canadian National crosses over the Milwaukee, Racine & Troy and the Mukwonago River.

Fortunately for modelers in HO and N scale, there are a large number of options available for easy-to-build bridge kits, as well as their supporting abutments and retaining walls. Follow along as we share the techniques we used to build and install the three bridges on our 2026 project railroad.



In real life, the CN's bridge over the Mukwonago River has a long center span that connects to two approach bridges. Unfortunately, the full bridge was too long to model on our layout, so we just built the center section, shown above.



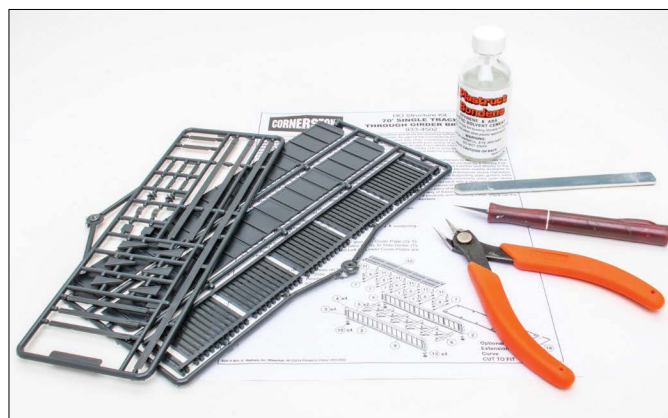
STEP 1 Bridge kits and kitbashes

Bryson Sleppy, Cody Grivno, and I split the bridge project between us. Bryson built the bridges, I installed the abutments and surrounding scenery, and Cody assisted me with the weathering and the final bridge installation work.

Bryson used three different Walthers kits for the bridges, including nos. 933-4500 30-foot through girder bridge, 933-4507 70-foot single-track deck girder bridge, and a 933-2948 90-foot double through girder bridge. He built the first two as stock kits, using the 30-foot through girder bridge for where the CN's line passes over the MR&T and the plate girder deck bridge where it then crosses the river. After cleaning up the parts, he assembled them using Plastruct Bondene plastic solvent cement, then primed both bridges with a light gray acrylic paint.

Later, I painted the through girder bridge with Tamiya TS-82 Rubber Black. Both kits include a plastic tie strip that has spike detail molded into it to allow accurate placement of the rails, which we'll cover in step 4. Cody painted those Vallejo 71.040 Burnt Umber at the same time he painted the rest of the track.

The MR&T's former Milwaukee Electric bridge over the Mukwonago River was something of a different story, however. First of all, we couldn't find a photo of what the bridge once looked like, as it was removed after the interurban line abandoned its track east of the town in 1939. But even if we had, it probably wouldn't have mattered, as we needed a passing siding at this location, so the bridge would have to be double tracked. On top of that, those tracks needed to



To build the bridges for the layout, Bryson used several Walthers through and deck-girder plastic kits.

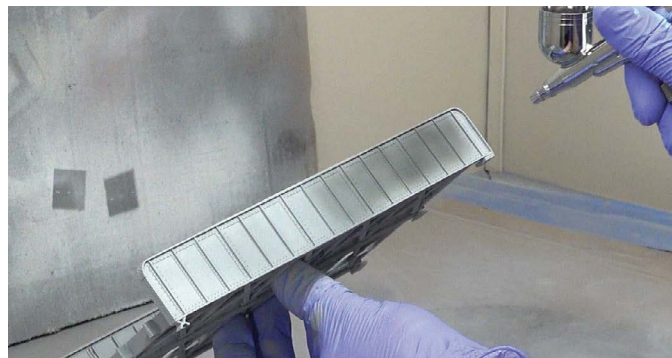
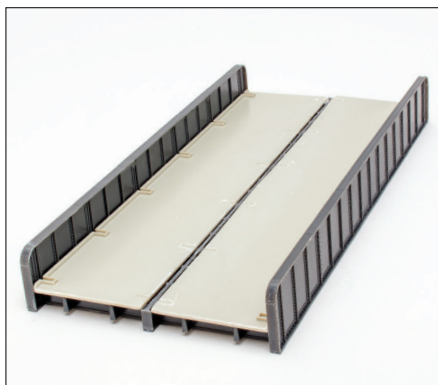


After Bryson had completed the CN bridges, David weathered them to match the photos he'd taken. He will share some of his techniques in a future issue of MR.

Because one of the tracks on the double through girder bridge had to curve to meet a turnout, Bryson cut down the center girder to be flush with the deck.



This view shows the bridge with the kit-supplied decks installed. Bryson would later add sheet styrene over the top of the decks to fill in the slot where the center girder had been.



Bryson airbrushed the double girder bridge using Vallejo Model Air 71.056 Dark Gray paint. David would later apply a variety of rust weathering to the model.

converge at a turnout just east of the river, so one of the lines needed to curve through the bridge. To solve for this, Bryson did a bit of kitbashing to make it work.

To allow the track to curve over the bridge, Bryson simply cut down the center girder from the bridge kit so that it sat flush with the deck plates. He then covered the deck and

gaps where the girder was trimmed shorter with a thin layer of styrene. This allowed Cody to later ballast the track though the concrete deck without it spilling down the gap and into the Mukwonago River below.

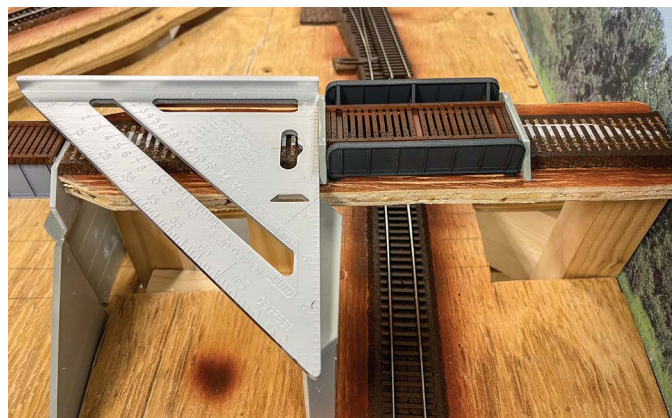
Bryson painted the bridge girders Vallejo 71.056 Panzer Dark Gray and the concrete deck Vallejo 71.045 Cement Gray, using an airbrush.

STEP 2 Bridge abutments

Bridge abutments are the stone, wood, or concrete structures that support a bridge, as well as hold the earth in place on either side of it. Walthers makes a nice selection of plastic bridge abutment kits to go with its models, so that's what we used. Bryson and I selected the appropriate height abutments for each bridge and set to work building and installing them.

We began by removing the track in all the bridge locations. We then marked and cut away the plywood subroadbed.

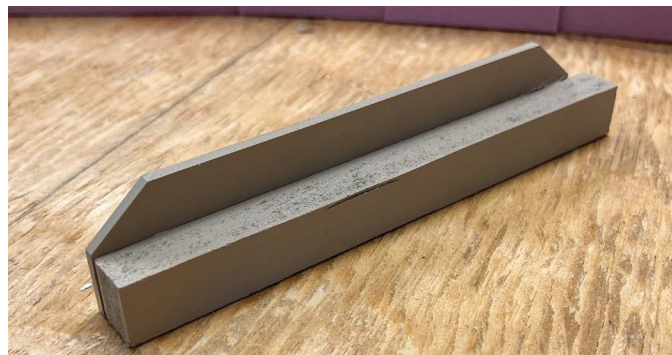
Walthers wing walls are made to be installed either straight or on an angle. After positioning the parts, we glued them together with plastic solvent cement and attached them to the layout with latex caulk. We let the sealant dry overnight.



David included the retaining wall sections set at each end of the bridge before marking and cutting the plywood. This is to make sure the opening is wide enough for both.



To make sure the wing walls followed the riverbed, David and Bryson glued them together once they were in place. They're cemented to the layout with latex caulk.



The double track through girder bridge rests on these short abutments, made from 1/2" MDF and leftover plastic retaining walls from the Walthers abutment kits.

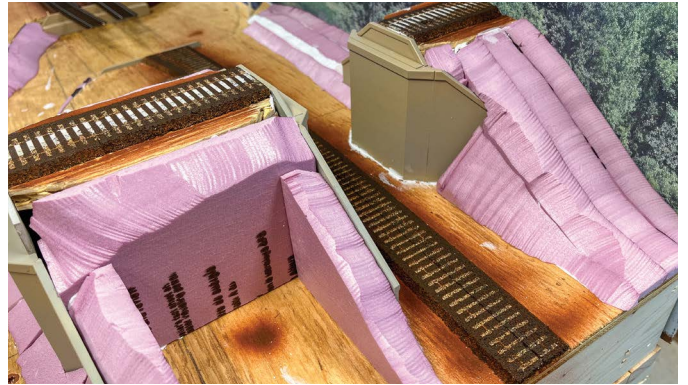
STEP 3 Surrounding scenery

Although we've already showed the scenery basics for this layout in the April 2026 MR, there are a few things to cover yet for blending the abutments into the surrounding landscape.

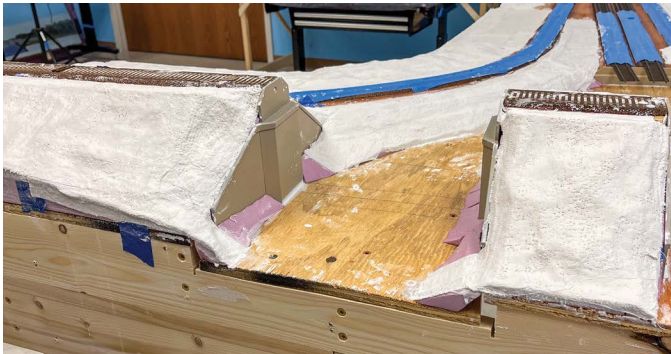
Because the plastic wing walls are thin, I backed them with foam board. For narrow openings, I completely filled in the space with foam pieces, cut to shape with a

hot wire tool. For the larger spaces, I built a foam box and filled it with packing peanuts. I then covered the area with two layers of plaster cloth and filled all the gaps with Sculptamold.

After cleaning the stray plaster from the abutments, I spray-painted them with Tamiya TS-46 Light Sand. Later, Cody weathered them with rust-colored paint.



David used foam insulation board to back all of the abutments and wing walls, as well as build out the embankment holding the CN main line.



After filling the gaps with packing peanuts, David covered the embankments with plaster cloth and Sculptamold.



Once he had cleaned the stray plaster from the abutments, David spray painted them a suitable concrete color.

STEP 4 Bridge installation

After weathering all three bridges, Cody and I set to work installing two of them. (The double bridge needed to wait until we'd completed the river.) We applied a drop of Aleene's Clear Tacky Glue to the bottom of each bridge shoe, then placed them on the piers to dry.

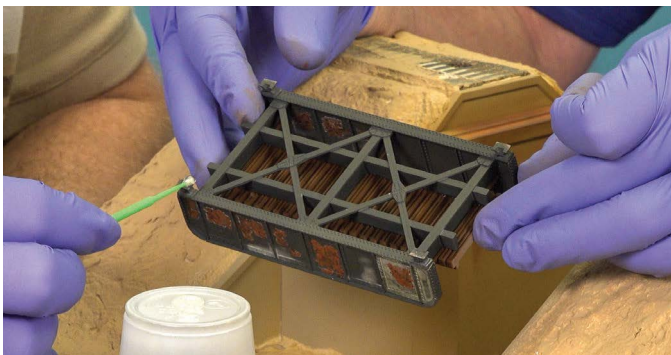
Next, we positioned the bridge tie strips, gluing those

to the girders with CA (cyanoacrylate adhesive).

Cody removed the appropriate ties from the flextrack sections that spanned the two bridges, applied CA to the bottom of the rails, and glued those in place as well. I then spiked the rest of the track to the roadbed and soldered new feeders to the rails to finish the project. **MR**



Because the tie strips were painted, Cody used a gel-type CA to attach them to the weathered bridge girders. He placed weights on top of the ties until the CA had set.



Cody and David attached the bridges to the layout using Aleene's Tacky Glue. The flexible adhesive provides a secure hold, but will allow the bridge to be removed if needed.



The rails are easy to align on the bridge ties thanks to small notches in the tie plate detail molded into the plastic strips.

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RAPIDO

Model a head-end caboose

This HO scale Monon car started life as a U.S. Army troop kitchen car

By **Mont Switzer**

Photos by the author



Mont Switzer shares how he modeled Monon head-end caboose C221 for his HO scale layout. He used an undecorated U.S. Army troop kitchen car from Wm. K. Walther's Inc. as the starting point for the project.

In the post-World War II era the Monon RR rostered a fleet of head-end cabooses, also known as rider cars. They were carried on all local trains next to the locomotive(s) to provide working space for the conductor and head brakeman. This “front office” saved the conductor and his crew a lot of steps as they worked closely with the engine crew and local agents to arrange pick ups and set outs. The rear brakeman typically stayed with the caboose to protect the rear end of the train if occupying the main.

Monon used different cars for this purpose over the years. In 1949, the railroad converted former U.S. Army troop kitchen cars to head-end cabooses. Since these cars already had doors and windows, most of the modifications involved steps, ladders, and grab irons that allowed crew members safe access to the car interior and roof. This article focuses on modeling head-end caboose C221.

Unfortunately, good photographs of this unique car are limited. That being said, my model is a good representation of the prototype but may not be 100% accurate.

Fortunately, Wm. K. Walther's Inc. offers an excellent model of the U.S. Army troop kitchen car. All I had to do was make the changes to the model similar to those Monon's Lafayette Car Shops made to the prototype back in 1949. Follow along to learn my techniques.

Mont Switzer, a longtime contributor to Model Railroader magazine, lives in Middletown, Ind. His article “How to detail and paint a semi-trailer” appeared in the September 2024 issue.

Materials list

A-Line

29000 stirrup steps, style A
29002 stirrup steps, style C

Detail Associates

6241 8-rung ladders (ends)
6242 7-rung ladders (sides)

Evergreen Scale Models styrene (strip unless noted)

101 .010" x .030"
102 .010" x .040"
120 .020" x .020"
122 .020" x .040"
124 .020" x .080"
126 .020" x .125"
153 .060" x .060"
159 .060" x .250"
221 .047" rod
222 .062" rod
223 .093" tube
9010 .010" sheet

Hi-Tech Details

6038 air hoses

Precision Scale Co.

48276 eyebolts

Kadee Quality Products Co.

158 medium shank scale couplers
2012 50-foot running boards (2)

Model Railroad Supply 5660 N. Quail Ln.

Middletown, IN 47356
21W decal lettering, modern caboose
300 decal lettering, freight car

Scalecoat II paint

2001 Flat Black
2023 Silver
2026 ATSF Red

Testor Corp.

1160 Dullcote

Tichy Train Group

3015 18" drop-type grab irons
3021 18" straight grab irons
3054 curved caboose grab irons
3081 running board supports
8017 rivets, .020" heads

Tomar Industries (Utah Pacific)

CS-73 smokejack

STEP 1 // BREAKING IT DOWN

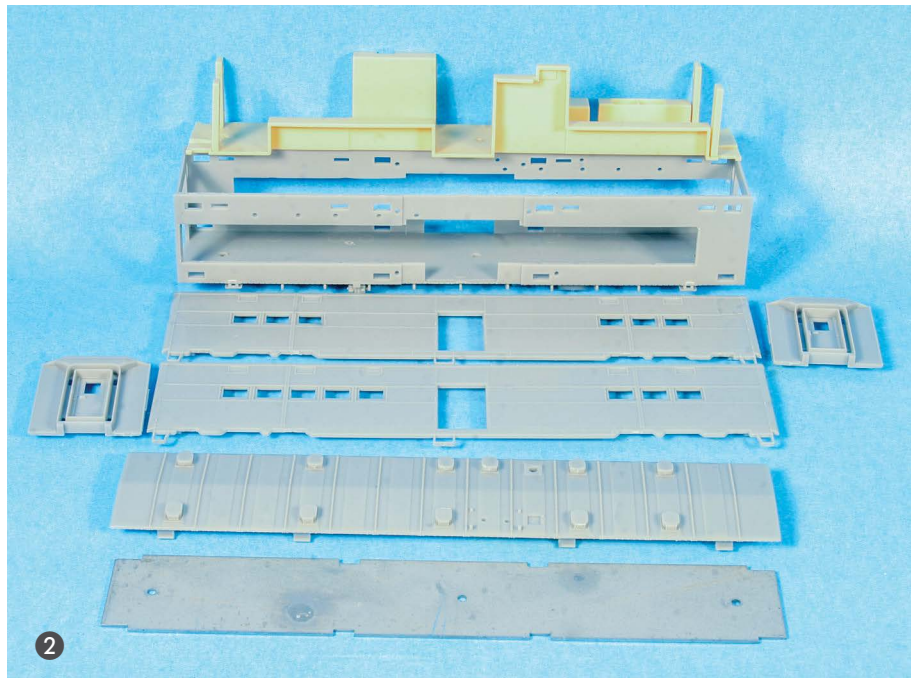
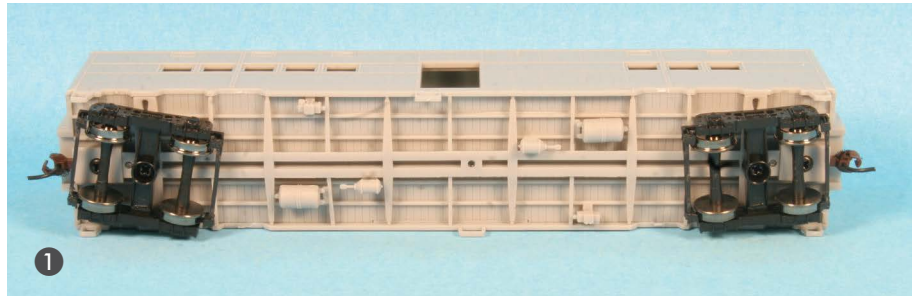
I used an undecorated U.S. Army troop kitchen car from Wm. K. Walthers Inc. as the starting point for this project. To make the model easier to detail, I disassembled it. As I was taking the model apart, I learned it's really a flat kit assembled around a core.

I started by removing the trucks and couplers ①. Then I turned my attention to the roof. Starting in the center, I slid a No. 17 blade under the roof and gently pried it upward until the mounting tab released. I repeated this process until all of the tabs had disengaged from the core and the roof let go.

Next, I removed the car sides using the same techniques. I inserted a No. 17 blade between the car sides and core and pried outward until the mounting tabs released. I took off the car ends using the same process.

With the roof, sides, and ends removed, I was left with the body core and underbody and a kitchen interior. The latter, along with a concealed weight, are held in with three screws, which I took out ②.

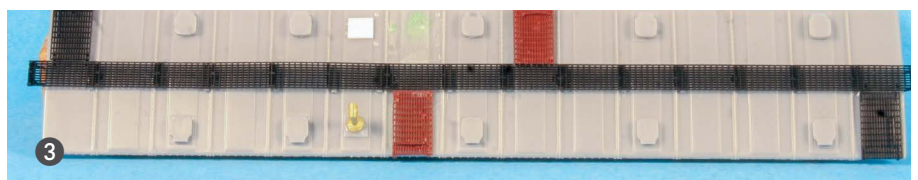
No further disassembly is required at this point. The sides and ends are easier to detail at the workbench. The underbody and roof will be painted black and the car sides and ends will be red. Since all of the parts are separate no masking is required.



STEP 2 // ROOF DETAILS

During my modeling era cabooses were required to have a full-length steel running board and ladders for access to the roof. I added the former using a Kadee Apex see-through molding designed for 50-foot cars. First, I taped the Kadee part to the underside of the roof to aid in locating the mounting hole locations. Then I drilled out the pilot holes along the centerline of the roof with a No. 55 bit in a pin vise, as shown in ①. Note that I removed the mounting pins for the laterals. I set the molding aside as the installation will be completed later in the project.

Next, I attached Tichy Train Group styrene running board support brackets next to the 14 roof crossmembers, visible in ②. The moldings are meant to simulate wood, but that will be hard to see after the running board is installed.



I then numbered the roof panels from left to right with the hole for the smokejack at the bottom ③. The first and fifteenth panels feature the laterals. On the sixth panel, I installed a small hatch for stowing coal, cut from .010" styrene sheet (.20" x .20"). The smokejack is on the opposite side.

I filled the two holes in the seventh panel with .062" styrene rod and removed the four molded mounting nubs, sanding everything smooth. Then I removed the ventilator directly across from there to make room for the mid-roof lateral.

Using a tip from fellow Monon modeler Chad Boas, I secured the running boards by slipping 1/8" long pieces of .093" styrene tube onto the mounting pins ④. The styrene sleeves let you to snug the running board molding against the Tichy brackets without the need for glue.



After I'd installed the running board, I added the mid-roof laterals (the Mineral Red parts in ⑤ above). I harvested the parts from a second Kadee molding. I attached .020" x .020" styrene to the running board edge of the laterals to bring the parts to the same height ⑤.

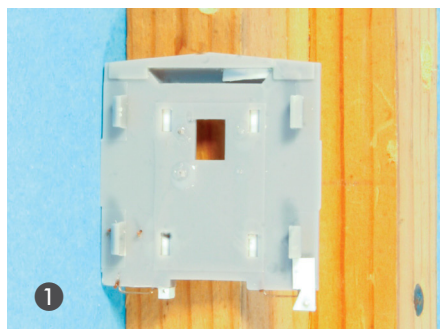
Because of the limited number of ladders on the cars sides and ends, none of the laterals on the prototype had the usual L-shaped corner grab irons. I trimmed the L-shaped grabs on the Kadee moldings so the remaining portion is parallel to the car sides and ends as appropriate.

STEP 3 // CAR ENDS

Correcting the car ends to match the Monon prototype was the most challenging part of the project. I filled the four vertical troughs that accept the diaphragms with .060" x .120" styrene strip ①. The filler material may extend above the sides slightly. If it does, sand it down until the gluing surface is even. Mask over the rivet detail to avoid damaging it (don't ask how I know this).

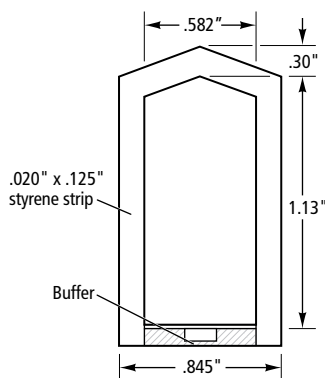
Using ② as a guide, I cut new end face plates from .010" x .125" styrene strip. I attached the face plates so the outer surfaces were even with the outer sides of the troughs.

The horizontal trough below the door is correct if a buffer is installed, which is the case here. I fashioned the buffers — one for each end — from a .640" length of .060" x .250" styrene strip. After centering the buffers in the troughs, I secured them with solvent cement. The buffers should extend outward further than any other portion of the car ends.



Next, I carved out the styrene under the peaked portion of the door opening. This wasn't easy and required an assortment of sharp modeling knives. Any damage can be filled with body putty ③.

I modified the car end structures to receive ladders to the left of the door openings. Using a No. 17 blade, I cut away all of the top left structural material. I replaced it with small gussets made from .020" x .060" styrene strip. I cut off a .060" length of strip stock, making a square. Then I cut the square diagonally, making two triangular-shaped gussets, one for each end. I cemented them in the new locations, which you can see above the right ladder stile in ③.



② Drawing not to scale

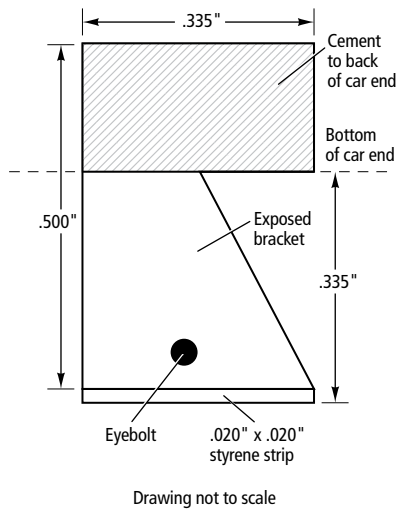
Unfortunately, I mangled the upper end rivet detail. I sanded all of it off with progressively finer wet-or-dry sandpaper. I replaced the horizontal end straps with .010" x .030" styrene strip. Then I added rivet decals from Archer Fine Transfers.

Both car ends have five grab irons. I installed them in No. 78 holes and secured the metal parts with CA. I started with the single 18" drop-style grab irons located to the right of the end door. I matched the location of the end grab irons with the height that matched the lower drop grabs on the car sides. Then I installed the two straight grab irons to the undersides of the end sills.

The end and sill grab irons are riveted in place. I drilled No. 75 holes above the grab iron legs and installed Tichy .020" rivets. Styrene solvent cement holds the rivets in place.

Finally, I added the 18" straight grabs mounted vertically on both sides





4

of the end doors. These grabs are included with the model. Molded drill-starter points with rivet detail make these easy to install. All of these modifications can be seen in 3, opposite.

Then I shifted my attention to the area below the end sills. I made air hose brackets from .060" x .060" styrene strip cut to a length of .060". I drilled a No. 72 hole in the center of both brackets. These brackets accommodated the Hi-Tech Details rubber air hoses.

I scratchbuilt the uncoupling lever brackets, 4 at left, from a piece of .020" x .125" strip. Then I added a length of .020" x .020" styrene at the bottom of the bracket to represent the horizontal stiffener on the prototype. I added a Precision Scale Co. eyebolt above the horizontal strip. I mounted the brackets on the inside ends so only .335" of material is exposed, facing outward from the ends.



The Detail Associates ladders are quite delicate so I saved their installation for the final end detailing step. The full-size car had six-rung ladders with the rungs spaced 16.25" apart.

To model these, I cut down Detail Associates seven-rung ladders. I snipped off the mounting pins and replaced them with .040" lengths of .020" x .040" styrene strip. I glued the mounting tabs to the back of the stiles, four per ladder, as you can see in photo 5 above.

STEP 4 // CAR SIDE (SIX WINDOWS)

Four Tichy Train Group 18" drop-style grab irons are required on both sides. Two grab irons are located just above the lower belt rail. I positioned the remaining grabs about halfway between the bottom of the side sills and the lower belt rails. After drilling holes with a No. 78 bit, I secured the metal parts from behind with CA.

I installed the supplied vertical grab iron to the left of the door. For Free Mags Check sastatus.com Drill-starter points are molded into the sides for these grabs. To the right of the door I added a Tichy Train Group curved grab iron. I again used a No. 78 bit to make holes for these grabs.

The prototype grab irons are riveted to the sides. I drilled No. 75 holes above the drop-style grab irons and both ends

of the curved grab iron. Then I installed Tichy .020" rivets in these holes, applying solvent cement from behind.

Next, I added the marker light brackets. I fashioned them from 6-scale-inch lengths of .060" styrene sheet.

The six-window side of Monon head-end caboose C221 had the center window on both sides of the door

opening blanked out. I modeled that detail using pieces of .010" x .250" styrene strip cut to a length of approximately .245".

I didn't install the door on this side of the car so I could place a head-end brakeman in the opening. The sill steps below the doors are described later in the article.



STEP 5 // CAR SIDE (EIGHT WINDOWS)

I used the same techniques to detail the eight-window side of the car. The curved grab should be to the right of the door, as seen later in the article.

Based on an image of a different Monon head-end caboose, I didn't blank out any windows on this side. However, I did model one in the open position. To do this, I first removed the window frame with a sharp No. 11 blade and small files. Then I added a piece of .010" x .030" styrene strip in the opening. This suggests the bottom of the window frame.

I installed the door on this side of the car. There are small nubs on the interior that help with alignment. I applied styrene solvent cement sparingly around the door from behind.

This is also a good time to trim off any details that extend beyond the inside surfaces of the sides and ends. Keeping the parts flush allows the sides to lay flat against the core.



STEP 6 // SILL STEPS



The head-end caboose has sill steps at each corner to facilitate switching operations and for mounting marker lamps. The molded steps on the Walthers model are a little heavy for my taste and vulnerable to breakage in an operating layout environment.

I sliced the molded steps even with the bottom of the sills, but left the mounting details. Then I drilled No. 75 holes in the bottom of the sills directly under these locations. I placed A-Line style C metal stirrup steps in the openings and secured them with CA. The bottom of the steps should extend approximately 14 scale inches below the side sills.

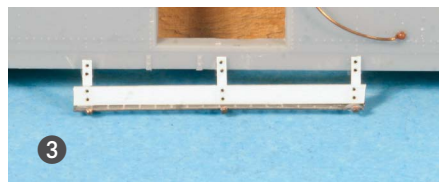
I scratchbuilt the 9-foot-long sill steps under the door openings. My goal



was to create steps that were sturdy yet prototypical. I started by cutting one leg off A-Line style A freight car stirrup steps, leaving a J-shaped bracket as seen in ①. Three brackets are needed per side.

Next, I drilled No. 75 holes in the bottom of the side sills. I located the holes directly below the rivets that indicate where the crossmembers attach to the sills. Then I attached the brackets, bottom facing out and level with the bottom of the corner stirrups, with CA. I scraped off the molded rivets that I used as alignment guides after the brackets were installed.

I used 9-scale-foot pieces of etched-metal running board material for the tread portion of the steps. The open



grating was used to eliminate snow and ice buildup on the prototype.

Then I attached the kick boards (.020" x .080" styrene strip) at a right angle to the etched-metal running board material. I built up the exposed J-brackets with .020" x .040" styrene strip cut to fit under the sills ②.

I cut .0630"-long mounting straps from .010" x .040" styrene strip. With each strap resting vertically on the etched running board material, I attached the straps over the top of the kick boards and onto the car sides.

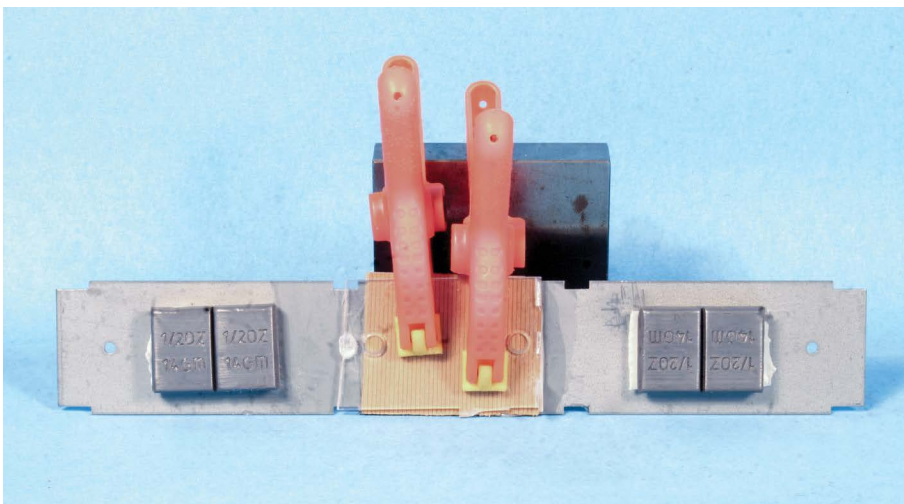
Finally, I added four rivet decals from Archer Fine Transfers to each strap ③. This gives the appearance the entire assembly is riveted to the side sills as was done on the prototype.

STEP 7 // WEIGHT AND UNDERBODY

Proper car weight is important for a model that will be carried next to the locomotive(s) during road switching operations. The completed model is about 2 ounces light for a 50-foot car. I added 2 ounces of A-Line self-adhesive weights to the stamped weight furnished with the model. For optimum stability I placed 1 ounce of weight centered over each truck.

Since the door will be open on the six-window side of the car, I added a piece of scribed basswood trimmed to fit. After attaching it to the weight, I stained it.

Lacking information on the underbody details for the car while in head-end caboose service, I left the detailed underbody alone. I didn't model the steam and signal line connections because, as a caboose, the car wouldn't call for those type of passenger-service details. However, since Monon C221 was operating in freight train service, there is a real possibility that the railroad converted it to a standard schedule AB brake system.

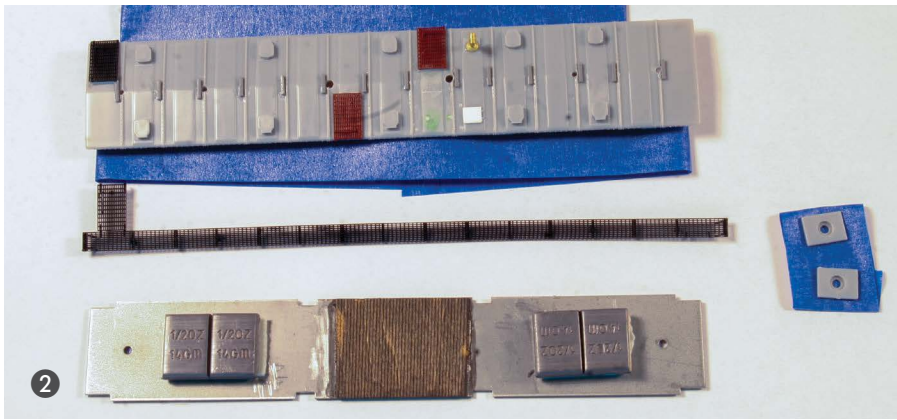


STEP 8 // PAINT AND DECALS



The model's separate sides, ends, roof, and underbody made the three-color paint scheme easy to apply. Prior to painting, I washed all of the parts in warm water with mild detergent, thoroughly rinsed them in cold water, and let them dry. I only handled the parts with gloved hands after they had been cleaned.

For ease of handling, I attached the sides and ends to a piece of cardboard with loops of painter's tape ①. I attached the roof to a separate piece of cardboard, but I had to make some temporary modifications. I removed the running boards to allow for better paint coverage under them. I also lightly tacked a piece of .060"-thick styrene sheet to the bottom of the roof.



This provided a flat surface that accepted the mounting tape but elevated the roof enough so paint could get underneath ②.

To ensure the final colors would cover evenly, I sprayed the parts with a solvent-based gray primer. I let the primer dry thoroughly (at least 24 hours, or until there was no discernible odor) before proceeding.

I airbrushed the roof, underbody, and exposed side of the steel weight with Scalecoat II Flat Black. I used its ATSF Red for the sides and ends.

Prototype lettering diagrams call for a unique combination of Monon lettering. I used two Model Railroad Supply decal sets (21W) to complete the C221. The MONON lettering consists of 12" high letters applied individually over 9 feet of the letter boards and centered over the opening.

The 30" heralds are located to the left of the door openings and centered directly above the inboard truck axle. The 7" tall C221 car number is located to the right of the door opening, centered above the inboard truck axle. The

3" tall C.I.L. reporting marks applied to the top left corner of the sides and to the right of the door on the ends are from Model Railroad Supply set 300.

I painted all of the safety appliances and platforms silver. To keep paint off the red and black surfaces, I slipped a piece of paper under the grabs and ladders where possible.

During the period that Monon C221 was painted, the Lafayette (Ind.) Car Shops was painting caboose window frames black. A couple of my go-to methods are black paint and a fine brush or a fine tip permanent marker. While I was at it, I painted the vents along the letter boards ③.

Though the C221 left the shops glossy, it didn't take long for the paint to become dull. I achieved this look with an airbrush and Testor's Dullcote. The clear finish also protects the decals.



STEP 9 // READY FOR THE RAILS

With the paint and lettering complete, I re-assembled the car in the same order I disassembled it. I set the weight into the body core and attached it from the underside with the supplied screws. The wood floor precluded using the center weight mounting screw.

With the body core on its back, I installed Kadее medium-shank, scale-size whisker couplers in the draft-gear boxes that are molded as part of the underbody. I secured the draft-gear box covers with the furnished screws. Then I installed the previously weathered trucks with the supplied screws ①.

Next, I re-attached the car sides. I made sure no detail parts were protruding through the backs of the car sides that might interfere with a tight fit against the body core. I snipped off or ground down any obstructions and modified the core as needed.

I then installed the car ends. I ground away sufficient amounts of the body core to accept the .020"-thick uncoupling lever brackets added to the back sides of the ends.

I added the clear window glazing supplied with the model. I cut it as needed to fill the window openings that aren't plated over. The window



modeled in the open position obviously didn't need glazing.

Before installing the roof, I shaved off the tabs that held it to the core to provide easier access to the interior. If I ever come across a diagram, I would like to detail the interior of this car.

Then I attached the painted ladders (Detail Associates 6242) to the left of

the door opening on the car sides. I made sure the ladders lined up with the mid-car running board lateral on both sides. Some of the Monon name in the letter boards is covered by the ladders, which is why I saved the installation for this part of the reassembly process. I finished up the project by adding some minor weathering around the smokejack, roof, and car ends.

This was a fun project that adds an interesting piece of equipment to my rolling stock fleet. The open door and window add visual interest to the model ②. Thanks to the fine model offered by Wm. K. Walther's Inc. that I used as a starting point, my Monon head-end caboose roster is now complete. [IMR](#)





① Pat Murphy, a visiting member from Pennsylvania, passes the Eagle Point shops on the 7½" gauge Eagle Point RR in Tennessee. The railroad, located outside Chattanooga, is operated by the Chattanooga Society of Model Engineers Inc. (csme-epr.com) and would make a great stop during the 2026 National Model Railroad Association convention.

A visit to the **EAGLE POINT RR**

A live steam railroad in
the Tennessee mountains

By Chuck Higdon

Photos as Erin Armstrong unless noted

The Eagle Point RR will be 26 years old in October. But the club, the Chattanooga Society of Model Engineers Inc., has a longer history going back to 1997 when Andy Morrison and David Porter Sr. met at the North Georgia Live Steamers in Duluth, Ga.

Andy put an ad in the April 1998 *Live Steam* and *Modeltec* magazines describing his interest in forming a live steam club in the Chattanooga area and asking that his contact info be published. Ten people contacted Andy, and their first meeting was in October 1998. In January 1999, the group settled on the name Chattanooga Society of Model Engineers. The idea was to encourage the participation of modelers interested in stationary steam engines, steam tractors and rollers, steamboats, and precision machinery, as well as outdoor railroading.

On Feb. 27, 1999, the club put on its first “mall show” at the Northgate Mall in the Chattanooga area in an attempt to sign up more new members. This was when CSME members met Larry Taylor, who described his retirement plan to build a private railroad with his friend Chuck Priputin. Larry proceeded with his plan and purchased 40 acres on Freedomia Mountain in Dunlap. In November 1999, Chuck and Larry invited the CSME to a meeting there to discuss their railroad plan and how the CSME could join Chuck and Larry on this new adventure.

The selection of the Taylor site and the focused attention on railroad building came at a price. The CSME lost their fine Collegedale contingent of non-railroad steamers. These men, fine craftsmen and good friends, were important contributors to the organization’s early days but weren’t interested in traveling to Dunlap for railroad building.

On May 2, 2000, track laying began on the Eagle Point RR (EPRR) loop around Larry’s shop using track panels fabricated in David Porter Sr.’s shop during the winter. Under the TRACK LAYOUT HISTORY tab on the club’s website, csme-epr.com, is the story of the progress of the railroad being built. It’s still being tweaked. You can see the progress made each year as you go through the pages.

Buildings for all occasions

Structures for the Eagle Point are both practical and scenic. There are many car barns placed around the railroad. These buildings hold the owners’



2 Crews prepare their trains on the Eagle Point Yard classification tracks. From left are Crews Bassham; in the middle, behind the red-and-cream cab units, is Josh Neely; and in the black T-shirt is Robert Valdez, seen talking with Rich Garber.

Chuck Higdon photo



3 Ryan Malone is at the controls of Georgia Central 2-4-0 No. 9 at Jasper, behind the Eagle Point shop. Chuck Higdon photo

rolling stock and maybe an engine or two. Some car barns are only tall enough to hold the cars, so they are 3 to 4 feet tall. Others are larger, tall enough to stand in and be able to work on 1:8 scale equipment.

All now need to have metal coverings that go into the ground to protect them in case there’s another fire (see the sidebar, “Fire!” on page 40). Near the Depot, which is also the club’s meeting space and is built to 1:1 scale rather than 1:8, are full-height car and engine shops. Close by are access tracks to unload from a vehicle or trailer. There are raised tracks to work around and under equipment if club members need them. At this point, the club has all that’s needed to run the railroad and keep all the equipment in shape.

Bridges are another important group of structures. Steel is sometimes used in their construction. Paul Boberg, Eagle

Point’s master mechanic, used steel for the trusses for the new P. J. Wendt bridge. The center of this bridge is 26 feet above the stream bed below.

Subassemblies of this bridge weighed between 300 and 500 pounds. The crew erecting the bridge had the transportation advantage of the railroad going right to the bridge site. The center span has two C channels combined into an arch. This arch had to fit into the curved tunnel at Sand Patch, on the lower half of the Tracy City branch.

Model structures placed around the Eagle Point RR site have their own challenges. Andy Morrison said, “The railroad sits on the edge of the Cumberland

Plateau. There is virtually no level land. The entire railroad is under large overhanging hardwood trees, and the full array of critters including snakes, mice, squirrels, groundhogs, foxes, bobcats, deer, turkeys, and hunters (inhabit the land).





4 Jayden Comer operates his coal-burning Tennessee Central No. 7 locomotive on the Eagle Point yard lead with the Eagle Point shop on the left. The main line is the two tracks curving off to the right.

“Because of the significantly sloping terrain, considerable excavation or filled retaining walls are required to site rail-side structures. Very large limestone outcroppings provide interesting obstructions. Structures in a bankside cut need to have sufficient clearance around them for drainage, maintenance access, fall leaf removal, and fire protection.

“Almost all of our railroad is away from vehicle access, so structures have had to be small or assembled on site. My wife, Ginger, and I constructed a three-track car barn (scaled to look like a repair shop), 7 x 16 feet, by building it at home in 3.5 x 4-foot modules. Many of the scale buildings at Eagle Point and Cowan Village were commercially built from roughly 0.125-inch-thick sheet plastic, making them rot free, lightweight, and easy to transport.

“Wood is readily available and easily worked with home workshop equipment. The problems are that it can dry out or rot; it can warp or split; all manners of critters like to eat it; it can be crushed by falling trees, debris, or derailed passing train cars; or it can be burned by wildfire. Metal would be an interesting material for making structures. The year-round exposure to corrosion from the weather (including lightning?) would be a consideration.”

Operating the railroad

One of the best parts about railroading at Eagle Point is the operations. These operations require everyone working together to set out and pick up the freight

cars, as well as run scheduled trains. People ride the trains and work them at different locations. Nick Porter talked to me about the “Card Order” operations and went into the details of what they do there. On the website, the CARD ORDER section also describes these.

In the most basic terms, an engineer and conductor take some cars from the yard to rail sidings along the main line, set out the inbound cars from their train, then pick up the outbound cars from these sidings. The club uses common

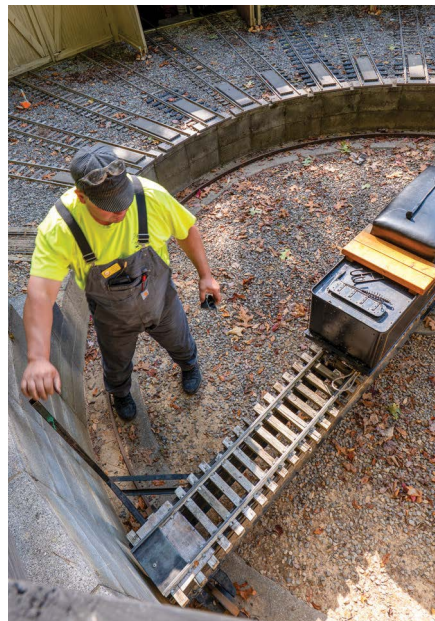
model railroad four-sided waybills to spot freight cars. This will sound familiar to indoor model railroaders.

All crews work with radios and talk with either a dispatcher, yardmaster, or trainmaster before setting out on their journeys. Crews also carry the train schedule with them, along with the waybills that act as a switch list. I’d have to take a map too, which I’m sure most first-timers do. There are signs at all the stations to tell you where you are.

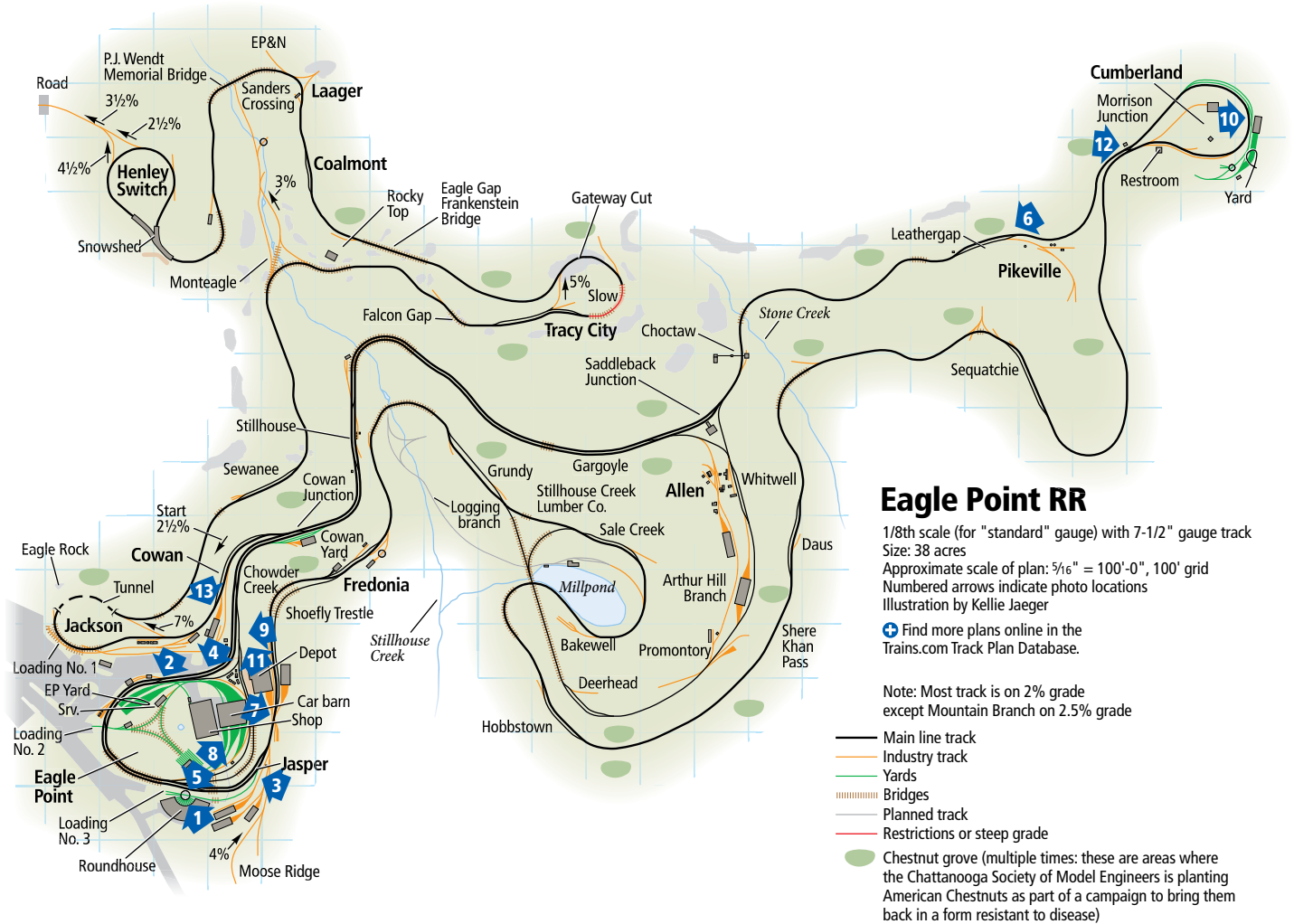
The crew also must keep an eye on the schedule and not block the main line for other trains that will pass them. It does keep you on your toes! This all happens out in the woods where you can’t see the next station while working a switching move. Jeff Benton offered some additional thoughts on operations on the Eagle Point RR:

“In 1:8 scale, we lose a lot in terms of a railroad’s fidelity to prototype lettering and equipment types, not to mention fidelity to era. And never mind that everything looks like a helicopter shot unless you’re lying flat on the ground, where you can’t run a train.

“What we get back, though, is operational authenticity. For example, we get actual momentum, not programmed in. So, if you’re going too fast and your train is too heavy to slow down quickly, you realize there’s no programming track that’s going to save you now. You use the engine, in reverse if necessary, and stick with it because the cars usually do not have brakes. In this scale, the motivation for operational detail comes from authenticity that is rooted in distance



5 Henry Starring lines the turntable at the Eagle Point roundhouse. Built by William B. Park around 1960 for his home railroad, it was donated to the club around 2005.



Eagle Point RR

1/8th scale (for "standard" gauge) with 7-1/2" gauge track
 Size: 38 acres
 Approximate scale of plan: 5/16" = 100'-0", 100' grid
 Numbered arrows indicate photo locations
 Illustration by Kellie Jaeger

➕ Find more plans online in the Trains.com Track Plan Database.

Note: Most track is on 2% grade except Mountain Branch on 2.5% grade

- Main line track
- Industry track
- Yards
- Bridges
- Planned track
- Restrictions or steep grade
- Chestnut grove (multiple times: these are areas where the Chattanooga Society of Model Engineers is planting American Chestnuts as part of a campaign to bring them back in a form resistant to disease)

The layout at a glance

Name: Eagle Point RR
Scale: 1:8 (for "standard" gauge) with 7 1/2" gauge track
Size: 38 acres
Prototype: freelance, plus Tracy City Branch of Nashville, Chattanooga, & St. Louis
Locale: southeastern Tennessee
Era: multiple
Style: outdoor, ride-on mountain railroad
Mainline run: 11,000 feet
Minimum radius: 65 feet (main line), 50 feet (Tracy City Branch)
Minimum turnout: No. 8 (main line), No. 7 (Tracy City Branch), and No. 6 (yards)
Maximum grade: 2.5% (main), one-way turn-back track is 7% max

Benchwork: natural earth and rock of surrounding terrain
Height: ground level except for bridges
Roadbed: packed earth with 2 inches of 3/4-inch crushed stone
Track: hand-laid code 1000 (1-inch tall) steel or aluminum rail on wood or plastic ties
Scenery: the natural flora of mountainous, southeastern Tennessee
Backdrop: mountains and valleys of southeastern Tennessee
Control: Onboard locomotives, including electrical, hydraulic, and mechanical. Some locomotives have remote (wireless) control



6 Photographer Special Extra 1915 East meets its westward counterpart, Photographer Special Extra 845 West, at Leathergap. Barry Garard is in control of the eastbound, with Larry Taylor keeping an eye on the passengers.

and momentum. Almost none of these details are window dressing.

"Another example: we do radio checks because we want to know if the radios work when we are well out of sight and hearing of each other, not because it adds to an atmosphere of realism. Another example is hand and whistle

signals. The person operating the locomotive is going to be far away from you pretty soon. Railroaders don't yell themselves hoarse; they use the standard signals [as appropriate].

"So if you can look past the railroad-museum visuals and instead focus on the well-motivated operational details, you'll

discover a kick like you will never find indoors," Jeff said.

Jeff also organizes the Radio Dispatch sessions, usually on the Nashville, Chattanooga & St. Louis Tracy City Branch. The dispatcher (normally Jeff), uses a magnetic board with labeled tabs to track train location. The timetable and



A forest fire tore through the Eagle Point RR in March 2025, leaving behind the charred remains of Allison Mattox-King's SD70. Much that wasn't made of steel was destroyed. Chuck Higdon photo

Fire!

On March 23, 2025, there was a fire in Dunlap, Tenn. It was a nearly 500-acre wildfire that broke out in Sequatchie County early Sunday afternoon. Rough terrain and weather conditions posed challenges for crews working to contain the fire. It started in a backyard in the valley below the railroad, then climbed up Fredonia Mountain, going right through the Eagle Point RR property.

Larry Taylor said he was working in a section of the railroad as the fire climbed up the mountain. He saw some embers land and a fire start. There are 5 gallon buckets all around the railroad full of water, but it wasn't enough. The local fire department set up around the main buildings and was able to keep them safe from the fire.

The next day, as the fire department and some club members toured the grounds, they found some fires still burning in trees. Piles of wood were still burning, and parts of some bridges were still smoldering. The firefighters put out the remaining hot spots.

On the railroad, 80% of the bridges had burned to the point they needed to be replaced. The car/engine storage sheds around the railroad had mixed results. Many are covered with steel siding. If that siding went into the ground, even with leaves against the wall, the shed survived. If not, the shed and the contents burned. Any aluminum items melted. The steel parts did not melt. 12 engines and 30 freight cars were destroyed. — Chuck Higdon



7 While some rolling stock, such as Larry Taylor's old caboose, looks like a model of something you'd find on a full-sized railroad, some is built for a purpose on a ride-on model railroad, such as Tennessean No. 901, a chair car used by crews, and Georgian No. 902, a straddle car used by passengers.



8 Howard Warren lifts the shell on his New York, Ontario & Western cab unit outside the Lower Level train shed at Eagle Point. Both cab units here belong to Howard. Taylor Williams (background) is also checking on equipment.

dispatcher's directives guide the crews in their progress down the main track.

I was able to attend one of these sessions. It was a lot of fun. Certainly, it's different working with the bigger equipment for someone who's accustomed to smaller scale model railroading.

I've never worked on a prototype railroad, so I have no idea what that's like. Our crew was three people. One acted as engineer and operated the engine, the other two took on the roles of brakeman/conductor and called the dispatcher to report our location and what we were doing, lined the switches, set the brakes on the freight cars, and coupled and uncoupled cars to get the job done.

Setting the brakes on a freight car means finding a sturdy stick or discarded railroad tie to place between the car and a tie to keep it from rolling. I rode with the other trainman on a flatcar with seats attached to the floor. We quickly learned not to lean to the same side. The lesson allowed us to practice rereiling the flatcar.

Elsewhere, Randy Townsend related how lubricating trucks is important. He was having some derailments and he wasn't quite sure what the cause was. So, he lubed all the sliding surfaces on the metallic parts of the trucks, on both the engines and freight cars. After that he had no more derailments. There must have been some friction that prevented the trucks from flexing enough as the rails dip and rise.



9 Louisville & Nashville No. 845 is owned by Larry Taylor. It's a gasoline powered, hydraulic drive locomotive with direct hydraulic controls.



10 Scott Reedy has his train on the main track while he checks its status before leaving Cumberland Yard.

Debora Mynatt showed me her Union Pacific 4-8-4 coal-fired steam engine. Her father completed it in 1954. With the help of others in the club, she's making some improvements to the braking system. At 2% and 2.5%, the grades on the Eagle Point RR are a little steeper than those at many other clubs, so good brakes can be a welcome improvement.

Signal system

The Eagle Point RR is equipped with a signal system. The system is used on the single-track sections between stations. There's a push trigger switch that sets the opposing signal to red ahead of the train at the end of the block and yellow behind for following trains.

Approaching trains need to stop before the turnout at red signals so the block-occupying train coming toward them can exit on the other track at the station. If the signal is green, the block is clear and can be entered. If the signal is yellow, there is a train ahead of you, and you should wait until they clear the block before you proceed.

The train protection from the signals then allows for the switching crews to work at the stations, and prevents trains between stations from abruptly meeting each other. There's also a push trigger switch that clears the signals as a train leaves the block. It's very important that

all operators use both push triggers at both ends of the blocks.

Talented members

Any club is made up of people who are devoted to the club in different ways. Larry Taylor, who owns the property the railroad is built on, and Chuck Priputin live nearby. They have been with the group from the beginning. Larry and Chuck can be there any day to work on projects or run a train. Having been model railroaders for many years they have a special appreciation for these large-scale trains.

The next closest member is Barry Garard. His wife and he moved to the area 7 years ago from Illinois. He said he didn't even know that model trains this large even existed. But once he found them just down the road from his new retirement home, he was hooked. He became a member 6 years ago.

His years of experience in different construction trades have helped him contribute to the railroad, especially to the rebuilding after the fire in March 2025. Barry helped plan the rebuilding and did much work to get the railroad back running again. He enjoys building bridges. Being retired he gets to work around the railroad and take care of the many little issues that pop up. Of course, a ride around the line is always a nice



These gravel hoppers, on loan from Mid-South Live Steamers, were used to help rebuild the Eagle Point RR after the fire. Chuck Higdon photo

Rebuilding

The railroad is in three major sections: mountain, middle, and lower. The mountain section has some spectacular views because of the steep terrain. That same terrain makes for a harder rebuilding effort.

The club got the other sections running first. Access to all locations is either by foot or rail. The main area had some spots to be repaired first. After those areas were fixed, the club had the flexibility to arrange work trains to shove out to the work areas. Trains could traverse the lower section on Aug. 9, 2025. Equipment for the rebuilding was borrowed from other clubs in the region. — Chuck Higdon



11 Mark McAllister brings his train past Cowan Village, near Eagle Point. In the village, club members, from left, Nick Porter, Rachel Zarko, Jeff Benton, and Barry Garard are gathered to observe a railroad car for the runaway car demonstration by Steve Wassell, not shown in the image.

diversion, as there are always tools or supplies to be delivered somewhere.

Benefits of membership

Being retired we do need a purpose to live fulfilled lives. The club offers that on many levels. Being outside for the maintenance that's always required on the property is another benefit.

Randy Townsend and I rode at the back of a train during a long train weekend on Labor Day 2025. He mentioned to me how, after recently being widowed, visits to the club are very enjoyable. I also know that to be true after my own loss.

There is always something to do and helping the other members is also a great feeling. As we took a break for lunch, it's evident the level of the camaraderie of the members. There were lots of



12 A train led by Tennessee Southern No. 810, a modified Electro-Motive Division Geep, is about to depart Cumberland, the eastern-most point on the railroad. Crews Bassham is engineer, with Scott Lindsay behind him. Scott built the locomotives for Crews.



13 Andy and Ginger Morrison built the Central Coast Shops at North Cowan. It's designed to look like a repair shop and houses their equipment at the railroad.

interesting conversations and planning for the afternoon.

Another thing I noticed about this group is some have been with the club for much of their lives. In the depot there is a spot where photos show deceased members. Many of the surnames are still at the club as the grown-up children of those members.

Giving back

While riding around the railroad, there are sections of fenced in areas. These contain, through modern genetic engineering, blight-tolerant American Chestnut tree saplings. There are 20 of them. One even has a native Chestnut tree. Eagle Point RR is working with the American Chestnut Foundation as they work to bring the chestnut tree back to America. While the fire damaged much of these areas, Larry was able to point out some positive growth happening. Eagle Point RR has been supporting this effort for many years now.

Visiting the railroad

Eagle Point is a private club and not open to the public. Instead, contact them through their website and ask for an invitation. For those visiting the 2026 National Model Railroad Association National convention in Chattanooga in July it would be a good time to visit. There are plans for an open house and open session during that time. [MRR](#)



Meet the club

The Eagle Point RR is maintained and operated by the Chattanooga Society of Model Engineers. There are roughly 100 members from all over the United States. Members include, front row, from left: Dale King, secretary and web editor; Steve Wassell, president; Glenn Williams, vice president; Mark McAllister, director; Andy Morrison, director; and Allison Mattox-King, treasurer and membership chairperson. Row against railing: Sally Boberg, Sandy Schmidt, Barry Garard, Mary Newlon, Randy Townsend, Rachel Zarko, Ginger Morrison, Deborah Mynatt, Jeff Gammons, Ron Newlon, Paul Boberg, and Mike Binkley. Back row: Howard Warren, Norm Schwede, Brandon Hughett, Bruce Hayes, Mike Murphy, Larry Taylor, Amanda Murphy, Al Greene, Dan Watson, and Grace Mynatt.

Grace Mynatt photo



THE PHREE LANZ & PHANTA ZEE RR

This 23 x 35-foot N scale model railroad is set in the western United States during the late 1950s

By Robert Bonham • Photos by the author

Welcome to the Phree Lanz & Phanta Zee RR. As you probably guessed by the name this is a freelanced model railroad. My 23 x 35-foot N scale layout depicts the western United States but isn't based on a specific locale. The setting is the late 1950s. Union Pacific is the primary railroad, with Southern Pacific and Denver & Rio Grande Western having occasional trackage rights on the UP. And of course there is the Phree Lanz & Phanta Zee (PL&PZ), an uncertified branch line of the UP.

One of the most common questions I receive about the model railroad is "Where did you get the ideas for the various scenes?" My answer? Through a windshield. Having been in the trucking and transportation business for more than 40 years, I've had the opportunity to see most of the landscape this country has to offer.

Just about everything on the layout represents some part of my life, as well as areas that I admired and took note of in my travels. I also tried to depict the various forms of transportation I was involved with during my career. Trains take top billing, but I included trucks, marine, and aviation. I even modeled a train and transportation museum.

Reigniting the flame

Trains have been a part of my life from an early age. My great grandfather and grandfather were both engineers, so was my father who grew up in that

environment. When I was 5 years old, I received a 4 x 8 sheet of Homasote with an oval of HO scale track, a siding, and a few buildings. I thought it was the greatest thing I'd ever seen.

In my late teens I set out to conquer the world and left the trains in my parents' basement, always keeping the hobby in the back of my mind. My father said he was going to continue to build and expand the layout, but due to health reasons never got the chance. I dedicated the Phree Lanz & Phanta Zee to my late father Roy J. Bonham Jr.

Thirty years later I married my wife, Pam. Her family and mine always put trains around the Christmas tree every year. I made a snow-covered scene with buildings and trees. That's when the bug to build a layout bit me. That was 24 years and four layouts ago. I've finally reached the point where I consider the PL&PZ finished — well, as much as you can consider a layout complete.

Benchwork and track

There aren't a lot of houses with basements in the southwest, so my first three model railroads were all built in garages. After buying a residence that came with land, I decided no more garage layouts.

Before I could start work on the PL&PZ, we had to sell a house, buy a house, move, and then construct a building for the trains. All of this took a little more than two years, which gave me time to plan not only the layout but the building itself. It allowed me to conform



1 Coming down from the mountains and crossing over Harbor Valley, *The City of Los Angeles* is heading to points east. Below, Union Pacific Mikado No. 1361 leads a train past Jane's Truck Stop on its way to the Harbor View Industrial Park. The action takes place on Robert Bonham's N scale 23 x 35 foot Phree Lanz & Phanta Zee RR.

the interior of the building to the layout instead of the other way around. I made a few minor changes that deviated from the original plan. During those two years I also built all of the turnouts I needed and many of the structures.

The dedicated layout space is in a 24 x 36-foot building. This is about the same size as a garage, but without large doors and windows. Except a shop in the corner, the rest of the floor space holds approximately 160 feet of linear run.

Before constructing the benchwork, I installed and painted an 1/8" tempered hardboard backdrop with coved corners. Installing the backdrop first made it



easier to paint the mountains and clouds and install fiber optic stars.

The benchwork is open grid with $\frac{5}{8}$ " plywood for the deck and roadbed. I set the layout at 42". With nine grand kids who love grandpa's trains, the height makes it easier for them to see things.

The valance and fascia, which follow the contour of the layout, are also $\frac{1}{8}$ " tempered hardboard. I painted both flat black and installed black curtains that extend from the bottom of the fascia to the floor to keep the focus on the layout.

I used Micro Engineering products for the track. The company's No. 6 turnouts are the only commercial switches on the layout. I built more than 120 turnouts using Fast Tracks assembly fixtures. Examples include code 55 No. 8 and code 70 Nos. 8, 10, 12, and 12 curved. I also kitbashed a few turnouts.

There's a third line I call "The Ridge Runner" as it runs along the outer ridge of the upper mountains. This is an independent line that serves the logging section of the layout.



2 As the *Pamela Ann* patiently waits to unload and reload, Union Pacific gas-turbine electric No. 14 leads a train of military equipment. A few tracks over a 2-8-4 Berkshire eases up to the platform for a station stop at Harbor View.

Power and lights

Having a new building with an unfinished ceiling and interior walls made it easy to put outlets where I needed them. Fortunately, I know how to do electrical

installation, which saved me a lot of money.

With the benchwork finished, but before adding the tabletop, I ran 14AWG bus wires for track power. I used 22AWG feeders for the track and turnouts.



3 Stoney Creek Canyon runs down the full length of the right side of the peninsula. Some of Robert's goals for the layout were to run multiple trains at once and create long, large mountain scenes.



4 Union Pacific Electro-Motive Division NW2 No. 1028 pulls a reefer full of lager and ale from Shipyard Brewing Co. Not to be overlooked are Big Boy 4022 making its way to the Harbor View Yard and UP's City of Los Angeles racing east to Chicago on the upper main line.

I divided the layout into four power districts, each with four sub-districts all wired to independent breakers. The upper main line, lower main line, branch line, and sidings are independent and unaffected by each other. This helps when troubleshooting short circuits.

The turnouts feature live frogs and are controlled via Digital Command Control. All 62 mainline turnouts have working signals.

Sixteen sets of Tri-Light overhead signals are spaced equally around both the upper and lower main lines. They're controlled by Model Train Technology

signal control systems. The systems work well and are easy to install and operate. I also have three working railroad crossings with functioning lights, arms, and bells using the same system from Model Train Technology.

I run trains with a Digitrax Digital Command Control system consisting of the command station and nine boosters. The decoders for the turnouts were custom made by a late acquaintance of mine from Australia. I've used these units on the last three layouts.

The main electrical power that operates the layout hooks into an

The layout at a glance

Name: Phree Lanz & Phanta Zee RR
Scale: N (1:160)
Size: 23 x 35 feet
Prototype: freelance
Locale: western United States
Era: transition
Style: walk-in
Mainline run: 280 feet
Minimum radius: 20" (main line), 12" (branch line)
Minimum turnout: No. 8 (main line), No. 6 (branch line)
Maximum grade: 1.5% (main line), 2% (branch line)
Benchwork: open grid
Height: 42"
Roadbed: commercial foam
Track: Micro Engineering (code 70, main line; code 55, branch line)
Scenery: spray foam and plaster castings
Backdrop: painted 1/8" tempered hardboard
Control: Digitrax DCC

eight-circuit switch control. Two of these circuits are hard wired under the back wall of the layout with plenty of outlets along the way. One operates anything that has to do with trains, turnouts, and signals. The other operates all accessories, including more than 2,000 light-emitting-diode lights, 55 animated signs, a working drive-in movie theater, sound effects, and animation. This arrangement allows me to operate and/or work on the trains without all of the lights and accessories on and vice versa.

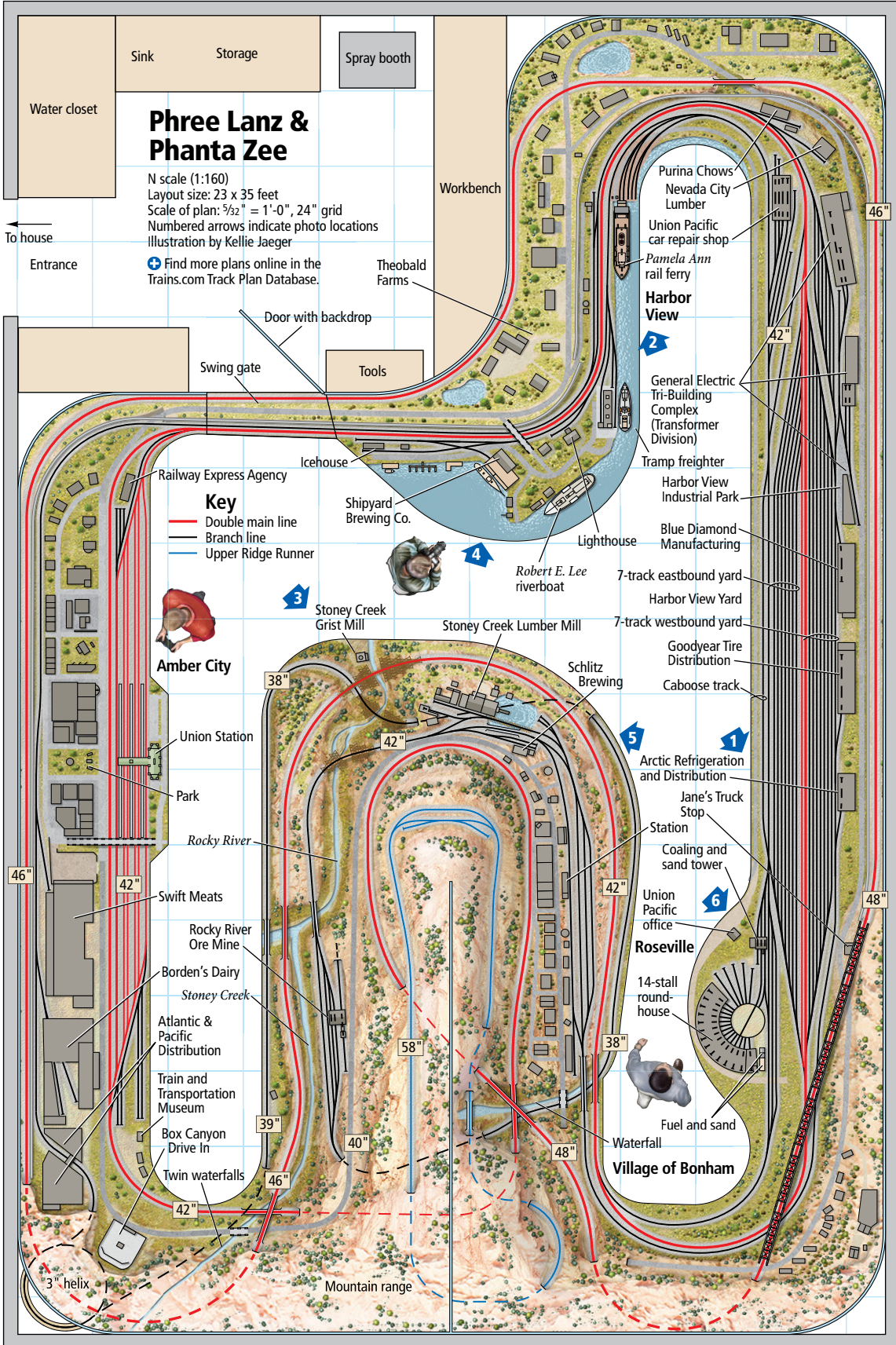
Mountains and water

I had two major scenery goals when building the PL&PZ. The first was to create 50 linear feet of mountain rock face 3 to 4 feet high. The second was a large harbor scene with 10½ square feet of water surface.

For the rock faces I used latex rubber molds from Bragdon Enterprises. They're not the cheapest, but the results are worth it. I've used them on all four of my model railroads.

Real rocks were used to make the molds, so the castings look natural. I filled the gaps between the castings with a gypsum and perlite mix using Elmer's industrial glue and paint with very little water. The glue kept the plaster from cracking, even in thick applications.

The harbor represents a large body of fresh water as all of the watercraft are



Phree Lanz & Phanta Zee

N scale (1:160)
 Layout size: 23 x 35 feet
 Scale of plan: 5/32" = 1'-0", 24" grid
 Numbered arrows indicate photo locations
 Illustration by Kellie Jaeger

Find more plans online in the Trains.com Track Plan Database.

Key

- Double main line
- Branch line
- Upper Ridge Runner

Water closet
 Sink
 Storage
 Spray booth

To house
 Entrance

Workbench

Theobald Farms

Door with backdrop
 Swing gate
 Tools

Railway Express Agency

Icehouse

Shipyards
 Brewing Co.

Purina Chows
 Nevada City
 Lumber

Union Pacific
 car repair shop
 Pamela Ann
 rail ferry

Harbor View

General Electric
 Tri-Building
 Complex
 (Transformer
 Division)

Tramp freighter
 Harbor View
 Industrial Park

Blue Diamond
 Manufacturing

7-track eastbound yard
 Harbor View Yard
 7-track westbound yard

Goodyear Tire
 Distribution
 Caboose track

Amber City

Union Station

Park

Rocky River

Swift Meats

Rocky River
 Ore Mine

Borden's Dairy

Stoney Creek

Atlantic &
 Pacific
 Distribution

Train and
 Transportation
 Museum

Box Canyon
 Drive In

Twin waterfalls

Stoney Creek
 Grist Mill

Stoney Creek
 Lumber Mill

Schlitz
 Brewing

Robert E. Lee
 riverboat

Arctic Refrigeration
 and Distribution

Jane's Truck
 Stop

Coaling and
 sand tower

Union Pacific
 office

14-stall
 round-house

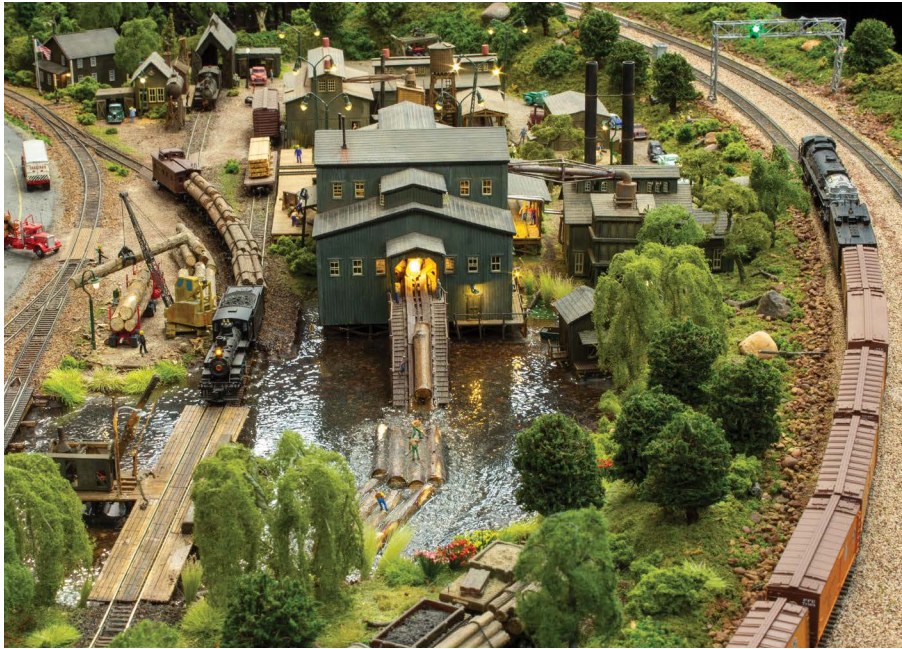
Fuel and sand

Waterfall

Village of Bonham

3" helix

Mountain range



freshwater vessels. Now I know you're thinking, "Where is there a large freshwater lake in the western United States?" Well, there isn't. But this is a freelanced layout, so anything goes. If I were to identify the location, I would say the western shore of Lake Superior.

The largest ship (and my favorite), *Pamela Ann*, is a replica of a Great Lakes rail ferry. Other vessels include a tramp freighter, a side-wheel riverboat, a schooner, four tugboats, and various commercial fishing and pleasure crafts.

I used a multi-step process to simulate the 3D look of cavitation under the water surface for the three boats that appear to be in motion. First, I painted the base dark navy blue. Then I placed the two boats and rail ferry in their respective places and penciled a light outline of their hulls on the water base. I added the white cavitation marks using the outlines as a guide.

Next, I poured the resin. I made four 1/8" pours, each time adding more cavitation. I finished the water surface with

5 It's another busy day at Stoney Creek Lumber Mill. At left, company owned Mogul No. 17 brings a load of timber down from the mountains. Over on the main, Southern Pacific Cab-Forward No. 4294 begins its mountain ascent with a solid train of Pacific Fruit Express refrigerator cars.

6 Robert's layout is set in the steam-to-diesel transition. Though there are plenty of steam locomotives in this scene, more efficient diesel locomotives are making inroads, handling duties like yard switching and passenger service.



Woodland Scenics Water Effects, which both covered the pencil marks and yielded a 3D appearance.

Trees and rocks

There are more than 3,200 trees on the PL&PZ. I purchased 2,500 conifer trees in bulk from the Philippines. The deciduous trees are from JTT, Woodland Scenics, and a few other brands.

I used Scenic Express and Woodland Scenics products for the ground cover. The hundreds of real rocks came from deserts in Arizona and Nevada. I modeled the dirt and gravel roads with very fine beach sand from the Pacific Coast, using pastels to give it a variegated look.

For contoured terrain I used Great Stuff aerosol foam sealant. The material is easy to apply and can be carved when dry. If you make a mistake when carving, simply apply more material over top and start over. Make sure you follow the safety instructions when working with spray foam.



Stoney Creek Canyon runs the full length on one side of the peninsula, about 20 feet. Midway down Stoney Creek Canyon, the Rocky River connects into it.

On the other side of the mountain, there's another smaller canyon by Roseville. This was created by a 320-scale-foot waterfall. I used Woodland Scenics Water Effects for the waterfall and whitewater effects.

Bridges and buildings

The two canyons and a couple other scenic features justified the addition of many different bridge scenes. There are 28 rail and five highway bridges on the model railroad, including 22 brass offerings from BLMA and Overland Models. I scratchbuilt the wood trestle and highway bridges.

There are four towns on the PZ&PL that feature a variety of structures. Some are scratchbuilt. Others are commercial offerings from manufacturers like Custom Model Railroads, Design Preservation Models, Lunde Studios, Wm. K. Walther's Inc., and Woodland Scenics. All of the buildings have light-emitting-diode lights installed.

Having been in the trucking business, I've loaded and unloaded at countless industries and manufacturing plants. There's no shortage of them on the PL&PZ. Most of the industries are scratchbuilt or kitbashed. They include Arctic Refrigeration, Atlantic & Pacific, Blue Diamond Manufacturing, Borden's Dairy, General Electric, Goodyear Tire, and Swift Premium Meats.

In addition, there are 22 other small industries. Some are scratchbuilt, others are kits from Bar Mills and Republic Locomotive Works.

I used three kits from The N Scale Architect to model Union Station. I wanted a station and concourse that could accommodate six tracks. My original goal was 12 tracks, but I didn't have enough space.

The lumber mill and outbuildings are Republic Locomotive Works kits. The lumber mill, Union Station, and several other industries have complete interiors.

Bringing it all together

I'm basically a railfan operator. Because of that, I decided to turn my 14-track freight yard into a scenicked staging yard. There are also 12 branch line trains staged in small yards or sidings throughout the model railroad.



Meet Robert Bonham

Robert Bonham lives in Fernley, Nev., about 30 miles east of Reno, Nev. He is retired after 40 years in the transportation industry. He thanks his wife, Pam, for all of her support. They have three adult children and nine grandchildren. Robert and Pam enjoy spending time with family, traveling, camping, and enjoying the retired life.

The Union Station area can hold six long passenger trains. I know this isn't necessarily prototypical, but it looks pretty cool to the average eye.

Though running trains in a prototypical fashion and operating sessions are great, I'm not really into those activities. I find it more relaxing to simply watch trains go by. For me every lap around the model railroad is a new adventure.

My layout is set in the steam-to-diesel transition era, and my fleet of more than 100 locomotives reflects that. Steam engines include Big Boys, Cab-Forwards, Challengers, Mikados, Moguls, Northerns, and Shays. My diesel fleet includes Alco PA and Electro-Motive Division E6 and E7 cab units and EMD NW2 switchers. I also operate Union Pacific gas-turbine electrics.

My favorite engine is a kitbashed three-truck Atlas Shay made from two models. All of the running gear is operable. I also added detail parts to the geared locomotive.

My rolling stock fleet consists of more than 600 freight cars and 110 passenger cars. About half of my freight car fleet is standard and depressed-center flatcars, Schnabel cars, and similar cars for transporting oversized equipment. I think seeing the freight adds visual interest to the layout. There's a little bias here as this was the type of trucking I did.

For me, model railroading is more than just a hobby. It has become a major part of my life. I would like to give a big thank you to my wife, Pam, who has supported me all the way. **MR**

Build a **CB&Q** standard livestock scale and scale house



Nelson Moyer scratchbuilt this enclosed livestock scale and scale house from basswood and styrene with a Campbell corrugated metal roof. The model is based on Chicago, Burlington & Quincy prototype drawings for Washington, Iowa. Too often, auxiliary structures such as scales are overlooked, but weight, and weight lost en route, has always played an important role in establishing rates paid to railroads for transportation.

These often overlooked structures were important to railroads' ability to set rates and earn money for moving livestock

By Nelson Moyer • Photos by the author

Livestock scales were found near stockyards wherever cattle, horses, sheep, or hogs were loaded into stockcars. Scales were sized according to the number of pens in a stockyard. Standard Chicago, Burlington & Quincy scales ranged from 8 x 14 feet to 14 x 30 feet. Stock lost weight in transit, and the railroads learned quickly that it was best to weigh livestock as farmers consigned them to the stockyard rather than later along the route, thus maximizing their profits.

Even the smallest towns in Iowa had stockyards and scales. Hogs were the primary livestock shipped from eastern Iowa, but cattle, sheep, and horses were also shipped by rail. Table 1 illustrates the volume of livestock traffic in Iowa along the CB&Q's Burlington-Washington Subdivision that I model in HO scale.

Livestock Scales

Scales were typically covered by a crude shed called a scale house. This scale house is not to be confused with the track scale houses that are better known to model railroaders. Small livestock scale houses were simply pole barns with plank siding and a roof covered with sheet metal, but larger scale houses were of board-and-batten construction with planked roof and rolled roofing. Both ends were open to facilitate herding livestock onto the scale platform from one end and off the scale platform on the other. The scale house roof provided some protection of the scale pit from the weather.

I made HO scale drawings of the stock scale featured in this article from drawings and dimensions taken from *Burlington Bulletin* No. 25. Because the

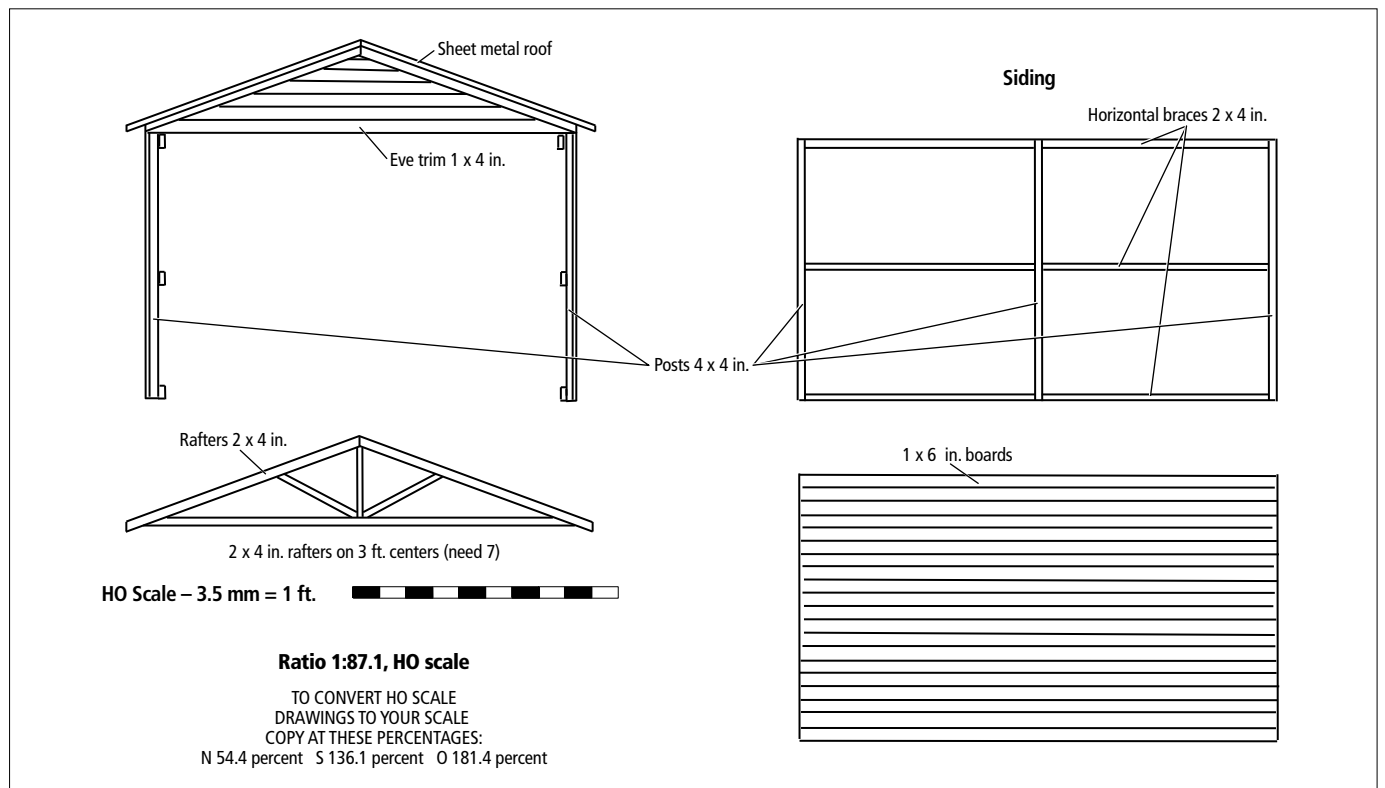
TABLE 1: STOCK PENS AND STOCKCAR CAPACITY OF SIDINGS IN TOWNS ALONG THE BURLINGTON-WASHINGTON SUBDIVISION OF THE CB&Q

Washington	5 pens	16 cars
Havre	3 pens	11 cars
Crawfordsville	5 pens	13 cars
Winfield	6 pens	16 cars
Mt. Union	5 pens	10 cars
Yarmouth	4 pens	14 cars
Roscoe	4 pens	10 cars

Winfield, Mt. Union, Yarmouth, and Roscoe, Iowa, all had 8 x 14-foot stock scales and 16 x 16-foot scale houses. Washington had an 8 x 14-foot scale and a 16 x 18-foot scale house.

scale house would obscure most of the scale, it's not necessary to model the scale box and platform in detail, though the construction steps and drawings to do so are provided.

Construction starts with cutting a concrete pit foundation from styrene and





Stock scales were used to weigh animals before they were loaded on stockcars as railroads charged by the weight of the load. Since the animals lost weight during the journey, it was best to weigh them before they were loaded.



The balance for the scale is inside the housing on the right. Most of this detail will be hidden by the shed around it.

painting it with Polly Scale Concrete or your favorite concrete color [Polly Scale paints are out of production. — *Ed.*] I built the scale platform and platform pen from stripwood cut to size, then stained. I dipped the wood into a 1:2 dilution of Campbell Tie Stain and turpentine, blotted the excess stain on paper towels, and allowed the wood to dry. I used yellow carpenter glue to bond wood parts and cyanoacrylate adhesive (CA) to bond dissimilar materials. Liquid plastic cement was used for bonding plastic parts.

The scale box was constructed of styrene using passenger car siding for the sides, .040"-square strips for the edge trim, .080" styrene for the base, and .060" styrene for the top. I beveled the top to match the prototype. The side next to the pen was cut horizontally to make an access door for the balance beam.

I cut trap-door hinges from paper, and made the trap-door lift ring from 30AWG magnet wire. I made the gate hinges from scale 1 x 2 styrene strips with a short piece of .020" styrene rod glued vertically on the post end of the hinge strap.

Next, I cut the L-brackets for the pen posts from .080" angle, then trimmed to scale dimensions. I painted the hinges, lift rings, and L-brackets with Polly Scale Roof Brown, then drybrushed them with Polly Scale Rust and Floquil Rail Brown.

I installed the scale on my layout by placing it on the scenery base and building a dirt ramp up to the gates on either end of the scale pen. Large scales were placed along chutes leading to stock pens, but small scales were placed near a pen gate with or without additional fencing.

Livestock scale house

Scale houses were simply constructed, essentially pole barns that were open on both ends. Because the inside construction is visible, I made the sides and gables using board-by-board construction. I modeled the posts, horizontal braces, siding, rafters, and roofing slats using scale lumber. The scale house rafter detail is not visible when placed on a layout, so it is not necessary to build up prototypical rafters, though I did that as the scale house was to be submitted for merit judging under the NMRA Achievement Program.

The smallest scale houses were 11 x 18 feet, not wide enough to protect the balance housing of an 8 foot scale. The scale houses at Winfield, Mt. Union, Yarmouth, and Roscoe were 16 feet square, which was just enough to cover both the

scale platform and the balance housing. This latter size is described here and based upon a drawing on page 22 of *Burlington Bulletin* No. 25.

The drawing shows a scale house that was 9 feet high at the eaves, but this height is insufficient for model railroad purposes: The height of the scale pen is 8'-4" above the scale platform, and the scale platform is elevated 10 scale inches above the scenery base. Therefore, a minimum height of 10 feet is required at the eaves for the scale pen to clear the rafters of the scale house.

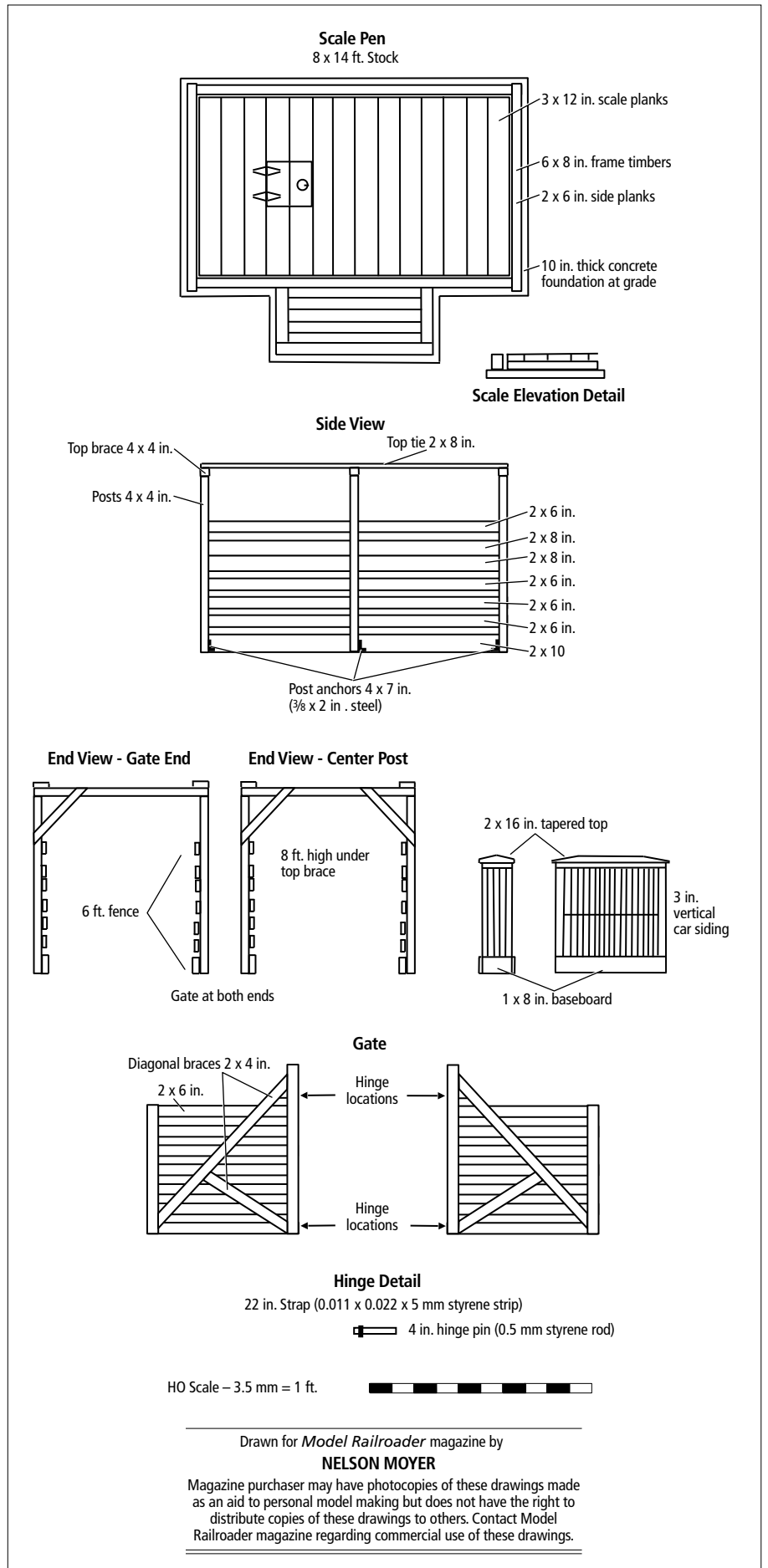
Scale houses were built from 4 x 4 posts, with 2 x 4 stringers and rafters. Rafters were installed on nominal 3 foot centers. The sides and gables were covered with 1 x 6 lumber. The eave trim was made from 1 x 4 lumber. A sheet metal roof was attached to 1 x 2 horizontal slats installed with a nominal 1 foot spacing. I cut Campbell corrugated metal sheets into 4 x 6-foot panels. These were further shortened as required by the roof profile. I then cut the cap strip from corrugated metal sheet and bent it to shape over a steel rule.

The scale featured in this article was also built from drawings and dimensions taken from *Burlington Bulletin* No. 25 as shown in the accompanying drawings. The scale house was built up from scale stripwood stained like the scale. Yellow carpenter's glue was used to bond wood parts, and CA was used to attach the sheet metal roofing material to the slats.

Painting options

No information about whether these structures were painted was available to me at the time of construction. Considering the economy of construction, it was reasonable to assume they were built and allowed to weather naturally, as were the pens they covered. Since that time, however, I've discovered two photographs of painted scale houses, one in Oregon, Ill., and one of the scale house and covered stock pens in Burlington, Iowa. Both were painted in the standard company colors of mineral red with bronze-green trim and either rolled roofing (Oregon) or corrugated tin (Burlington).

If more than one scale and scale house is present on your model railroad, you may wish to paint some and leave others painted and weathered, or simply unpainted. A wash of mineral red on the outside boards of the sides and eaves would be sufficient. I brush-painted the corrugated-tin roof with Dullcote, then drybrushed it with a thin wash prepared





Nelson's shed has a corrugated metal roof. Some structures had roll roofing. Construction is simple, with 4 x 4 posts and 2 x 4 bracing sheathed in 1 x 6 siding.



This inside view of the roof shows how it's supported by 2 x 4 trusses. A jig would simplify building the trusses.

from 1 part Floquil Roof Brown and 2 parts Floquil Rust.

A spot in your scene

Scale houses are centered over the stock scale, with an equal amount of space on either side. The open gate prevents livestock from bypassing the scale platform on the side with the balance-beam housing. Though the scale house obscures the scale platform to some extent, the overall effect of the scale and scale house adds interest to any stock-yard scene.

Stock scales are rarely seen on model railroads, yet they are interesting and utilitarian structures that take up little space. If you have a stock pen and a siding for stockcars, you need a stock scale and scale house. [MIR](#)

Nelson Moyer, MMR, is a widower living in Iowa City, Iowa. He is a retired microbiologist. His layout features the CB&Q main line through Burlington, Iowa. His other interests are classical music and jazz, and he plays euphonium in the Iowa City New Horizons Band.



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PROTOTYPE IMAGE SHOWN PHOTO BY NICK STEWART

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GRIND YOUR OWN GROUND FOAM

William Parsons was having a difficult time getting the scenery materials he wanted near where he lived, so he started making his own ground foam. His foam is the brighter, finer green material mixed in with some darker, coarser commercial foam.

Sometimes you just can't find what you want at the hobby shop

By William Parsons • Photos by the author

I had started the scenic journey of my layout and in doing so, decided to make my own ground foam/tree foliage.

One may ask, "Why not just buy the stuff from the hobby shop?" My answer is simple. The commercially available stuff is just too coarse to work with N scale scenery, and expensive as well, but that's really not my point here.

Where I live, I have to purchase nearly 95% of my hobby materials online. This includes everything from the track spikes to ground foam and static grasses, and then the orders take three to five days to arrive. In addition to the cost of the materials, I have to consider shipping, which can add up. This could really take the wind out of the sails, so to speak. So if a fella could make something like ground foam for a few dollars and get great quality results, well heck, why not?

My ground foam is made with a few simple ingredients: foam makeup sponges, acrylic craft paint, and distilled water. I use makeup sponges due to both cost and availability. Truth be known, though, it was by accident, a happy accident as artist Bob Ross would have said.

My choice of acrylic paints vs. fabric dye is also due to cost and availability. Perhaps the fabric dye would have held its fastness better, but the acrylic paint is more readily accessible where I live and is easier to clean up. So far I've made about five different colors, and the cost of making a liter size freezer bag of ground foam is about \$7 Canadian (around \$5 in the U.S.A.)

William Parsons models in N scale and has been in and out of the model railroad hobby for more than 25 years. This is his first story in Model Railroader.

Materials list

- 2 packages of foam makeup wedges (20 count)
- 1 4-ounce (118ml) bottle of acrylic craft paint (color will vary based on project)
- 1 gallon (4 liter) bottle of distilled water
- India ink (black) with eye dropper

Other supplies

- 2 large disposable roasting pans
- 2 packages of cheesecloth
- 1 pair of durable rubber or latex gloves

Step 1: FILL THE BLENDER



I start by emptying two packages of foam makeup wedges into a blender ①. Then I fill the blender about three-quarters full with distilled water and squirt in about half a bottle (2 ounces) of acrylic craft paint ②.

I should mention that I prefer to use a kitchen blender and not a food processor (bullet type) because I found the bullet type is not suitable for heavy blending and could burn out before the chopping process is complete.

Step 2: CHOP IT UP



Make sure the lid is tight on the blender. Then run it intermittently for a few seconds until it's no longer making chopping sounds. Stop every few seconds and swirl the mixture with a stir stick to ensure the foam makeup wedges get evenly blended. This part of the process usually takes about 6 to 8 minutes to accomplish. Keep going until the mixture is circulating smoothly like a milkshake and there are no more chopping sounds.

Step 3: REMOVING THE WATER

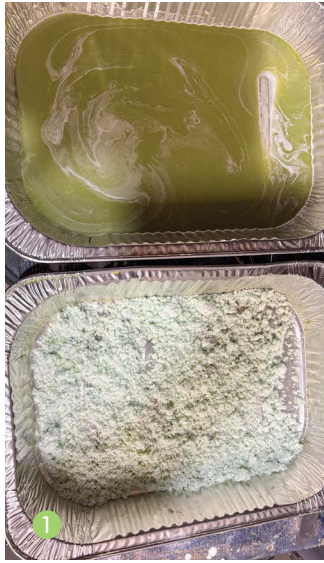


Next, I lay a piece of cheesecloth inside one of the two roasting pans ①. With the cheesecloth in place, I dump the entire contents of the blender into the roasting pan atop the cheesecloth ②. Then I carefully pull up the corners and edges of the cheesecloth containing the mixture, making sure that foam doesn't spill out.

Once the foam mixture is securely contained within the cheesecloth, it's time to extract as much of the water from

the foam as possible. I do this by wringing out the water through the cheesecloth, tightly twisting the woven cotton cloth while squeezing it with my hands ③. Make sure you wear your rubber gloves before squeezing out the water. Although the paint isn't necessarily toxic, you don't want to end up with green hands.

Step 4: FINAL ADJUSTMENTS



After the water has been extracted, empty the contents of the cheesecloth into a second (dry) roasting pan and spread it out as evenly as possible **1**.

Next, run your fingers through the ground foam to find any large or un-chopped pieces. However, if you ran the blender for 6 to 8 minutes or more, and got a “milkshake-like” consistency as explained previously, there shouldn’t be any lumps in the mix.

The color will dramatically change after you have squeezed out the water, but this will be replenished by the next few steps.

One thing I’ve done is add more color with paint. Just squirt it over the damp foam and mix everything together **2**. If after a while I don’t get the darker tone I want, I add four drops of black India ink and blend everything together **3**. Add the ink slowly as it’s very concentrated.

Step 5: LET IT DRY



Once I have ground foam to the desired color, I leave it evenly spread out inside the pan and let dry for a day or two **1**. Then I package the finished product into a large freezer bag **2**.

You may be tempted to put the ground foam outside to shorten the drying time, but I don’t recommend this. Once the foam starts to dry, it can easily get blown out of the roasting pan. Covering the pan only restricts the airflow needed to dry the foam. Keeping the pan in a safe location with a bit of air circulation at room temperature has been the best solution for me.

All of the materials needed for this project are easy to find **3**. Before long you’ll have a ready supply of ground foam for your layout. **MR**

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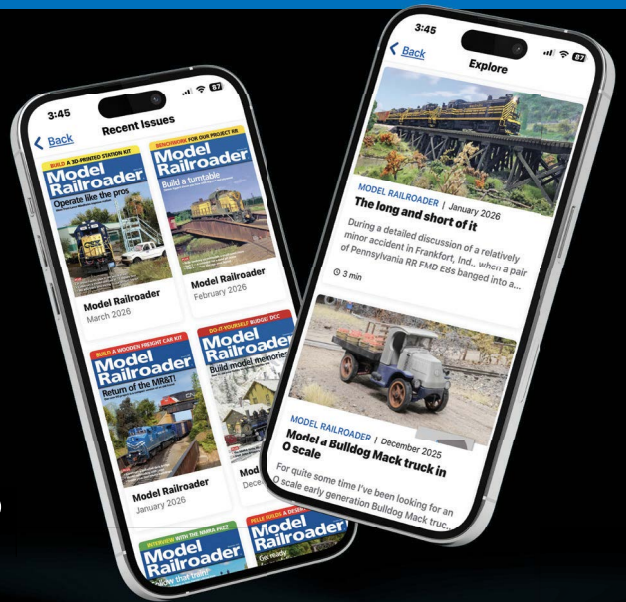
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B&M Train 5507 at Troy Ledges



In 1998, I decided to model the Boston & Maine RR's Cheshire Branch. At that time, I had no place to build my B&M dream layout, and so I had no idea how much of the 56-mile prototype I would be able to replicate. But in 2005, I purchased a clean, new basement with a dwelling above it. That was when my grand vision for a prototype model railroad ran directly into the reality of an 18 x 28-foot basement.

Many of the locations I had hoped to re-create in HO scale had to be crossed off my wish list. But there was a signature scene I was determined to keep: Troy Ledges. Troy Ledges was 2 miles north (railroad west) of Troy,

N.H. The Cheshire RR built its line through the area in the mid-1840s on its way from a connection with the Vermont & Massachusetts RR at South Ashburnham, Mass., to the Connecticut River at Bellows Falls, Vt. It was eventually absorbed into the rapidly expanding Boston & Maine system in 1900.

Penetrating the Ledges was one of the more difficult civil engineering challenges of the entire Cheshire RR undertaking. It required two deep cuts through solid granite "ledges." Between them, two bridge spans crossed the South Branch of the Ashuelot River and Keene-Troy Road. Keep in mind that this task was accomplished in the era


of black powder, hand-quarried granite, and oxen power.

By 1947 (the year that I model) things had changed quite a bit at the Ledges. In the late 1920s, as part of a system-wide upgrade, the B&M replaced the pair of aging truss spans with two heavy girder bridges. To support these heavier spans, a concrete replacement pier was constructed between them, and the two original stone abutments were reinforced with concrete.

Another major change occurred during World War II when Keene-Troy Road was abandoned and replaced with a modern, two-lane highway (today's Route 12). A new bridge was constructed

alongside the railroad to carry Route 12 over the river. The result was an easily accessed location for railfans to photograph trains at the Ledges.

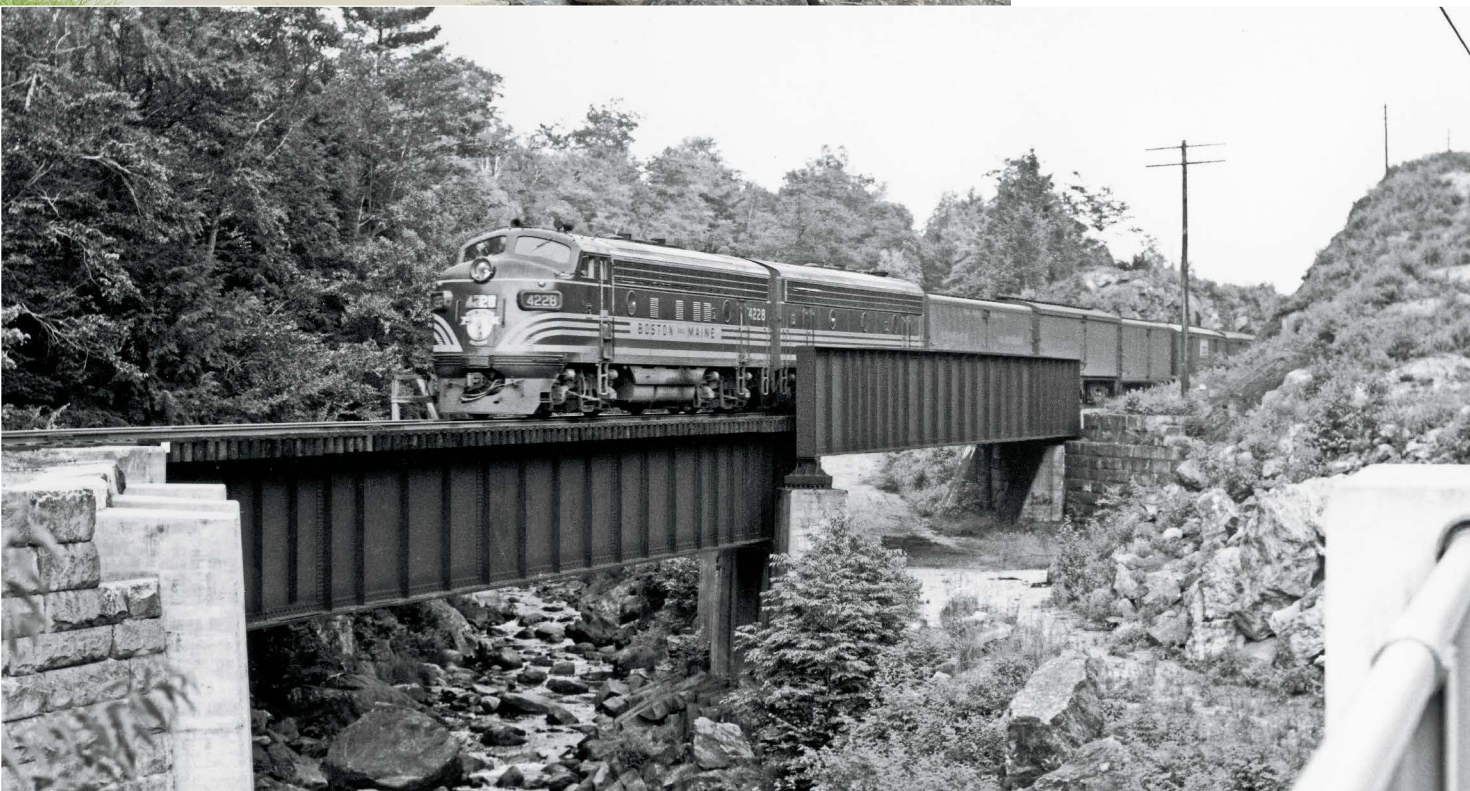
Alas, virtually everything that existed at Troy Ledges in 1947 is gone today: the girder bridges, the cut-stone abutments, the tracks, the narrow cuts, even the Route 12 railfan bridge! But I was determined to model what I had missed no matter the available space. I didn't have room to model the Route 12 railfan bridge, but I managed to include most everything else on my HO scale rendition of the Troy Ledges.

You can see more of my Cheshire Branch in *Model Railroad Planning 2021*. 

Send us your scenes

Have you modeled a scene based on a prototype photo? Send both the prototype and model photos, along with a brief description of the scene and the modeling techniques shown, to: Prototype to Model, *Model Railroader* magazine, 18650 W. Corporate Dr., Suite 103, Brookfield, WI 53045; or email to Consulting Editor Tony Koester at consulting.editor@firecrown.com.

On June 10, 1951, Boston & Maine train No. 5507 rolls westbound through the Ledges at Troy, N.H., on its afternoon journey from Boston to Bellows Falls, Vt. Troy Ledges was a popular scenic highlight of the B&M's 56-mile Cheshire Branch. It was also easily accessible to the photographers, who over the years photographed trains here from every conceivable angle. Wayne Brumbaugh took the prototype photo below from the Route 12 bridge alongside the B&M's Cheshire Branch. On Jim Dufour's HO Cheshire Branch, B&M F2 4224 passes through Troy Ledges with Train 5507. Prototype photo courtesy of Bob's Photo; model photo by Randy Laframboise



Engineer Richard "Dick" Bradley widens the throttle on Burlington Northern First X33 approaching Saunders, Wis. His father W.H. "Bill" Bradley is conductor on the caboose crossing the Soo Line at MJ Tower in the background on Sept. 5, 1970. The action takes place on Dan Holbrook's HO scale BN Duluth/Superior Twin Ports layout.

Craig Wilson photo







Send us your photos

Trackside Photos is a showcase for the work of *Model Railroader* readers. Send your photos (digital images 5 megapixels or larger) on a flash drive to: *Model Railroader*, Trackside Photos, 18650 W. Corporate Dr., Suite 103, Brookfield, WI 53045; or email them to us at editor@modelrailroader.com.

Georgia & Florida F7A No. 801 and Southern Ry. F3A No. 4142 cross the Alapaha River bridge with boxcar loads of finished paper products on Charles Trevey's HO scale Georgia & Florida RR. His layout appeared in the May 2024 issue of *Model Railroader* magazine.

Charles Trevey photo



A westbound mixed freight rounds the curve at the crest of McClure Pass, led by Denver & Rio Grande Western Mikado No. 1202. In the distance, the peaks of Colorado's West Elk Mountains form the backdrop on this crisp fall day. The action takes place on Casey Dowling's N scale Colorado Midland Western layout, set in western Colorado. The locomotive is from Broadway Limited Imports. Casey took the photo.



A pair of New Haven FL9 diesels lumber down the ramp from the motor shop on Dick Karnes' S scale (1:64) New York, Westchester & Boston layout. These magnificent FL9s, one powered and one dummy, were built by the late Vic Roseman. The bodies are lengthened American Models FP7 shells riding on parts from American Models and Omnicon. Dick Karnes photo

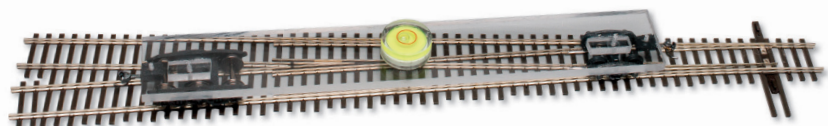
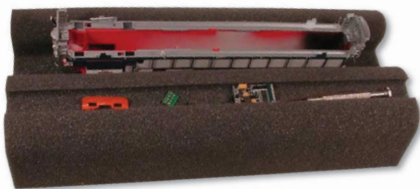
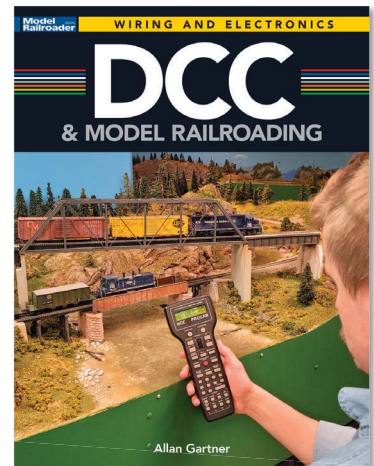
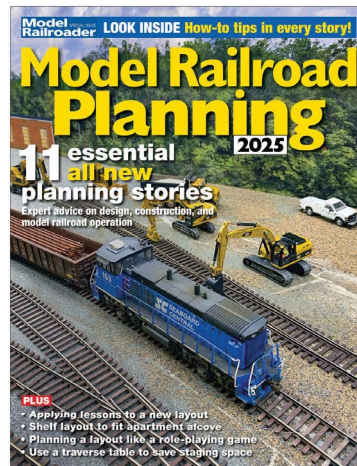
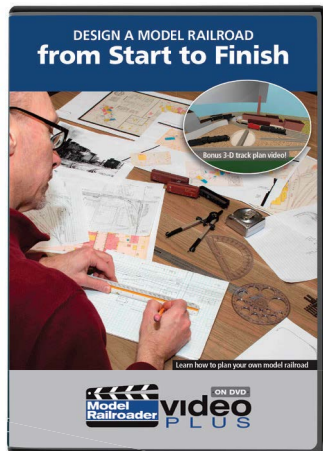


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FL, CRYSTAL RIVER: Regal Railways presents Toy Trains & Hobby Show, Florida National Guard Armory, 8551 W. Venable St., Crystal River, FL 34429. Saturday, June 13, 2026, 9:00am-2:00pm. Admission: \$6.00 adults, children under 12 free. Vendors and operating layout. Lunch items available. Contact Joe: 727-244-1341 or visit www.regalrailways.com for more information.

IL, COLLINSVILLE: 19th Annual St. Louis Railroad Prototype Modelers Meet. Gateway Convention Center, 1 Gateway Dr., Collinsville, IL 62234. July 23-25, 2026. Friday 9:00am-9:00pm and Saturday 9:00am-5:00pm. Admission: \$35.00 for both days; \$25.00 for Saturday only. Thursday & Friday, 6:00pm-10:00pm layout tours, operating sessions and social gatherings. For information, www.stlrpm.com or Contact: Lonnie Bathurst, bathurst@litchfieldil.com or 217-556-0314

IL, EAST MOLINE: Quad City Society of Model Engineers Open House and Swap Meet. Saturday, May 23, 2026, 9am-2pm, 740 16th Avenue, East Moline, IL 61244. (The Old East Moline Public Library.) Admission: \$5 (cash only), children 12 and under are free. John's Trains & Hobbies will be there selling.

IL, ST. CHARLES: 50th Annual Kane County Railroadiana and Model Train Show. Kane County Fairgrounds, (Front Building), 525 South Randall Rd., St. Charles, IL 60174. Sunday, June 14, 2026, 10:00am-3:00pm. Admission: \$6.00 (includes tax). Children under 12 FREE. Tables starting at \$65.00. For information: 847-358-1185, RussFierce@aol.com or www.RRShows.com

MN, BLOOMINGTON: The 46th National Narrow Gauge Convention. September 2-5, 2026. Doubletree by Hilton Hotel, 7800 Normandale Blvd., Zip: 55439. Early Bird Admission: \$139 until May 31, 2026. More than 75 vendors of all scales, 85 outstanding clinics, 40 home and club layouts on tour, contest room with models and photos. Free parking at hotel. Information: www.2026nngc.com

NC, RALEIGH: Neuse River Valley Model RR Club 9th annual SPRING INTO TRAINS Show. NEW DATES: May 23-24, Sat 9-5; Sun 10-4. Larger venue: Graham Building at NC State Fairgrounds. 400 vendor tables, 16 operating layouts. Display your models at our Craftsman's Showcase. Admission: \$10 covers both days, children 12 and under free with adult. Visit www.nrclub.net

WI, MARINETTE: Trains, Games, and Automobiles Show. 24,000 sq. ft. of fun at the Marinette Recreation Center. 2501 Pierce Ave., Marinette, WI. Saturday, June 27, 2026, 9am-5pm. Sunday, June 28, 2026, 9am-3pm. Free Admission! Sponsored by the Wisconsin & Michigan Model Railroad Club, Enginehouse Services, and Game Knights. Contact Dave Rickaby at wmwestdiv@yahoo.com or 715-584-9310

WI, ONALASKA: Rail Fair, Omni Center, 255 Riders Club Road. Saturday, July 18, 2026, 10am-4pm. Admission \$8.00, under 12 free with adult. Railroad Show—Flea Market—Swap Meet. BUY/SELL/TRADE. Model, Toy & Antique Trains & Memorabilia, Railroad Exhibits & Displays. Information: 4000 Foundation, PO Box 3411, La Crosse, WI 54602, 608-498-9522. www.4000foundation.org

WY, CHEYENNE: Sherman Hill Train Show and Hobby Expo. Archer Event Center, 3801 Archer Pkwy, Cheyenne, WY 82009. June 13 & 14, 2026. Saturday 9am-5pm; Sunday 10am-3pm. Admission: Adults \$10.00, Children under 12 free. Model Trains, Plastic & Diecast Models, Radio Control, Slot Cars, Other Crafts. For info contact: Duane Dorn, shmrcts@gmail.com or 970-381-4711

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When do-it-yourself is counterproductive

There was a time when I took a measure of pride in doing everything at work and at play. During my early years editing *Railroad Model Craftsman*, I was both the editor and the art director. I chose what went into the magazine, edited the copy, wrote the captions, edited the front-and-back-of-the-book columns, designed the page layouts, drew the track plans and “figures,” and pasted down the galleys of type using the hot-wax system.

When I got home, I got to work building the Allegheny Midland based on a track plan I had designed. I hand-laid the track and stayed pretty faithful to the original plan with a few course changes suggested by my good friend Jim Boyd when he saw an opportunity I had overlooked. Things improved at RMC when Bill Schaumburg joined the staff, which was a clue about a better way to get things done.

A quarter-century later when I decided it was time to replace the mountain-climbing Midland Road with my former hometown favorite Nickel Plate Road, I had come to the realization that trying to do everything by myself was counterproductive. Bill Darnaby convinced me that Micro Engineering’s flextrack had better detail (four spikes per tie and tie plates) than my handlaid track, which speeded things up considerably.

My track plan for the NKP was a single-deck disaster. Bill pointed out that there was no way to reach

my operational goals for a single-track, high-speed freight railroad operating under timetable-and-train-order rules without multiple decks. He introduced me to Frank Hodina of resin freight car fame, and in short order Frank had produced a masterful plan that a quarter-century later my crew and I are still enjoying.

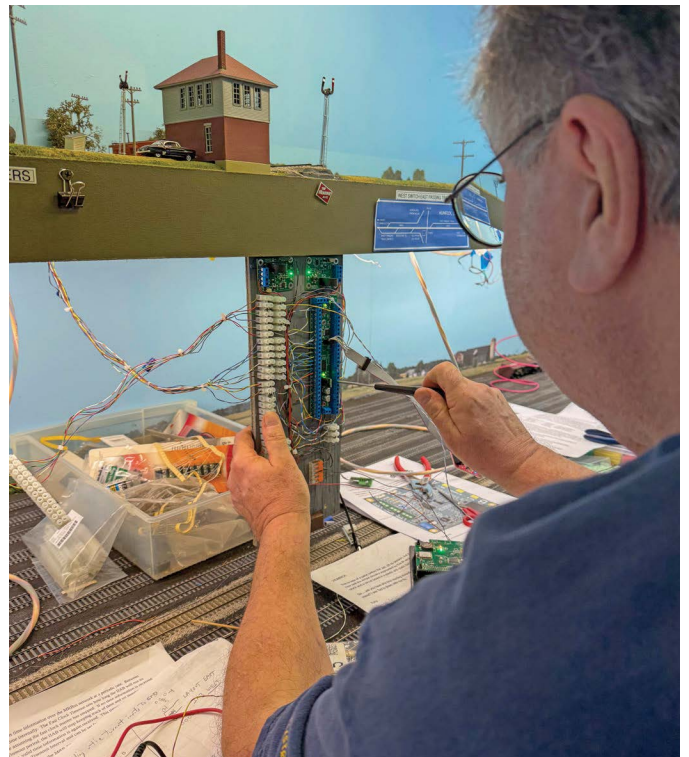
The goal had shifted from a need to prove to myself that I could design and build a decent model railroad — I had done that already — to building an historically accurate depiction of an actual railroad as it appeared circa 1954. And the approach had also shifted from do-it-yourself to enlisting the help of modeling friends when it became obvious that would save time better devoted to another project.

Along the way, I also learned another important lesson, one I had begun to come to grips with on the Allegheny Midland. I discovered it was too easy to accept too much help. I had to learn what advice was in line with my deeply held objectives, and what was perhaps convenient but would wind up venturing off in a direction I was not comfortable with.

Turning down help or advice, however, can be difficult. Friendships can drift apart if it’s not handled well. This is where communication comes in. Poor communication about one’s objectives will invariably result in disappointing



POOR COMMUNICATION ABOUT ONE'S OBJECTIVES WILL INVARIABLY RESULT IN DISAPPOINTING RESULTS AT WORK OR AT PLAY.
— TONY



Retired electrical engineer Dave Olesen makes dealing with complex circuitry such as connecting the myriad wires from home signals, detectors, and switch-point indicators to Iowa Scale Engineering’s novel Interlocking in a Box hardware look relatively easy. Tony Koester photo

results at work or at play. Communications has long been my profession, but it’s not easy to consistently do it well. I have failed miserably on occasion.

Having a model railroad that friends can enjoy operating on a regular basis goes a long way toward easing the task of obtaining skilled help when (not if) it’s needed. For example, one of my crew is building an ambitious base-ment-size railroad of his own. He’s helped me numerous times, so I’ve been merging his aerial drone images of local signature scenes into yards-long color backdrops to set off some of the most impressive structures I’ve ever seen. Other friends scratchbuilt many of them, ranging from bridges to

coaling docks, as a way of thanking him in advance for building a railroad everyone is looking forward to operating. And the sooner, the better. *Tempus fugit.*

I was surprised at how quickly the cavalry arrived when it became obvious that some tasks were either best handled by more than one person or above my pay grade. There are few things that absolutely, positively must be done on a model railroad that the average modeler can’t accomplish, but doing so may take an inordinate amount of time. Installing complex signaling circuits is a good example (see photo).

Besides, having someone(s) to chat with as a project progresses toward the finish line is a lot more fun than going it alone. **MIR**



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- Magnetically operated E-Z Mate® Mark II Couplers
- Blackened metal wheels with RP25 contours



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LONG ISLAND RAIL ROAD #250
(Bicentennial logo; without dynamic brakes)
Item No. 66806



BNSF #2040
(H4 scheme; with dynamic brakes)
Item No. 66807



CSX® #2742
(Bright Future scheme; with dynamic brakes)
Item No. 66808



UNION PACIFIC® #358
(modern yellow sill stripes; without dynamic brakes)
Item No. 66809



Shipping Summer 2026



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