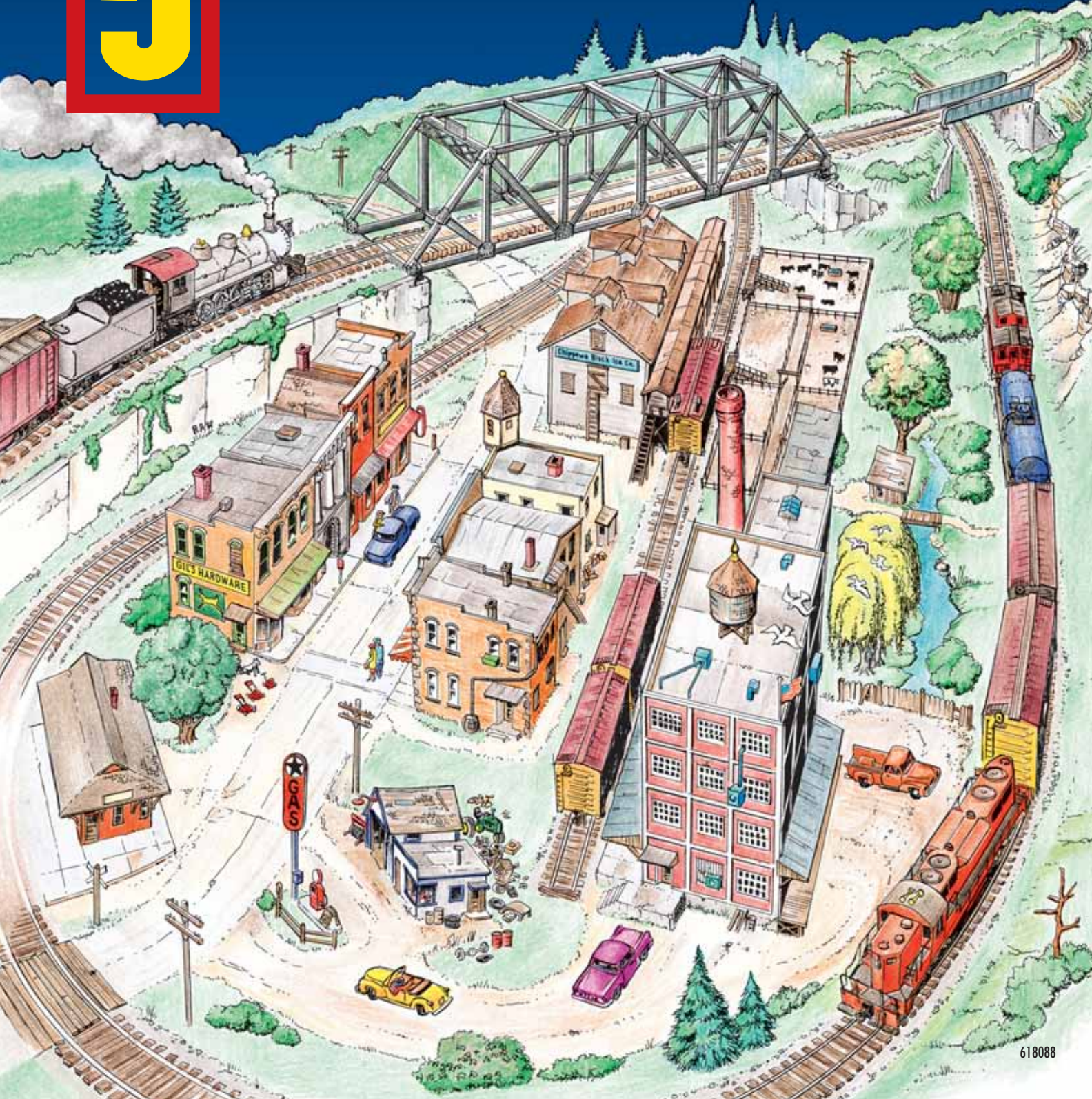


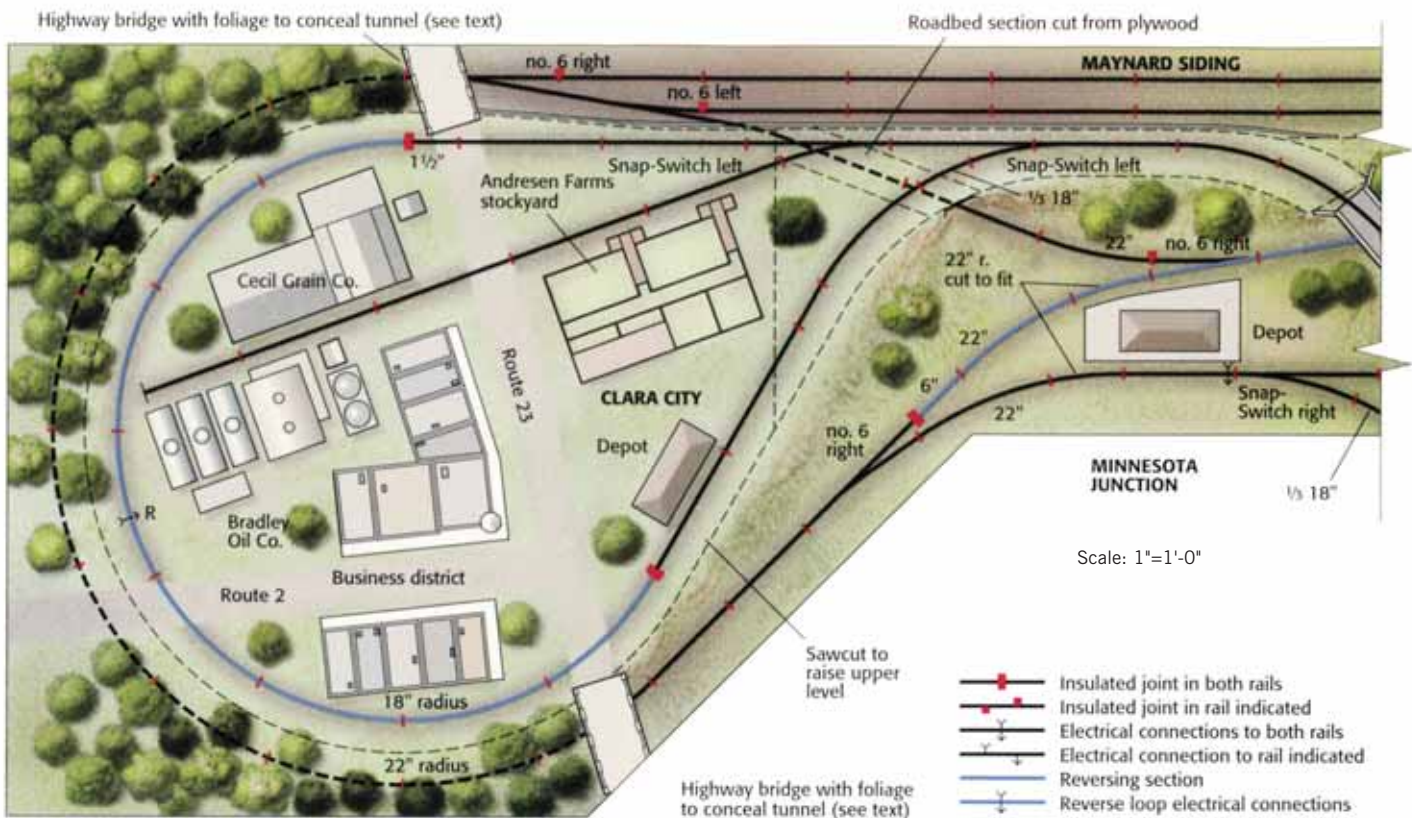
**Model  
Railroader**  
MAGAZINE

HO AND N SCALE PLANS • LISTS OF MATERIALS  
A SUPPLEMENT TO MODEL RAILROADER MAGAZINE

**5**

# COMPACT TRACK PLANS





# The Chippewa Central

An HO scale railroad built with sectional track

By Jim Hediger

You can pack a lot of model railroad fun into a small space, and in this booklet we'll show you five ways to do it. The plans featured here have all appeared in MODEL RAILROADER Magazine.

Each one has a unique theme, and all contain a key element of modern model railroad design – “fiddle” or “staging” yards. Simply put, these simulate connections with “the rest of the world” beyond our layouts. Track plans are jumping off points, so don't feel you have to conform to every line and illustration. We hope these plans inspire you to start building a layout. And remember, this is a hobby, so have fun!

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The Chippewa Central is a fictional Minnesota short line connecting two small agricultural towns with the outside world in the mid-1950s. Minnesota Junction is the interchange connection with the Great Northern. Then the Chippewa Central (CHC) heads northeast through Granite Falls and up a long grade at Maynard to reach the end of the line at Clara City.

Meat packing provides most of the CHC's traffic. The Andresen Farms stockyard is the major shipper at Clara City, but there's also a grain elevator and a fuel dealer. Granite Falls is home to the Pioneer Packing Co. and an icing plant.

### Benchwork

A single 4 x 8-foot sheet of 1/2" plywood is the basis for many beginners' layouts, but in this case, a 2 x 4-foot addition provides space for a lot more creativity. Wood screws will work well to attach the plywood to the framing. Bolt the sections together so they can be separated for moving or expansion.

### The grade and upper level

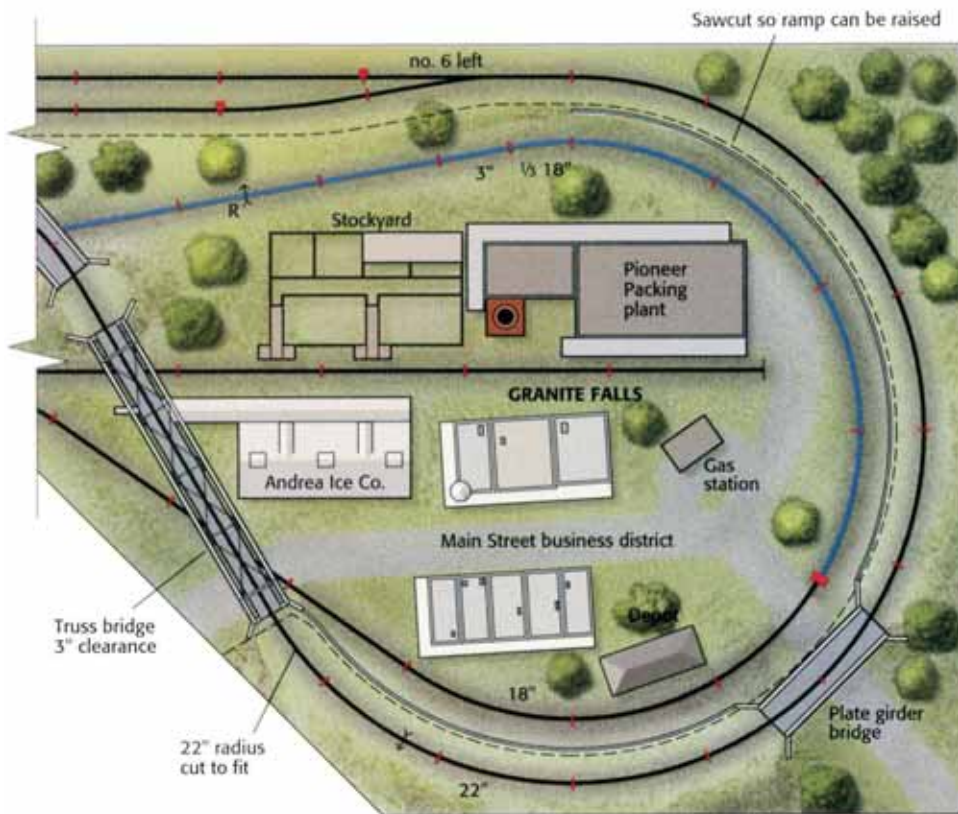
Building the grade and upper level is the only tricky part of this railroad. Carefully mark the track locations and then saw the entire Clara City loop out of the tabletop. Use 1 x 4 spacer blocks to raise it above the main layout level.

Another cut makes it easy to start the grade just past the switches at Maynard siding. Gradually raise and support the track until it reaches the height of a 1 x 4 spacer block near the bridge abutment. Try to make the track level for the last foot or so before the bridge.

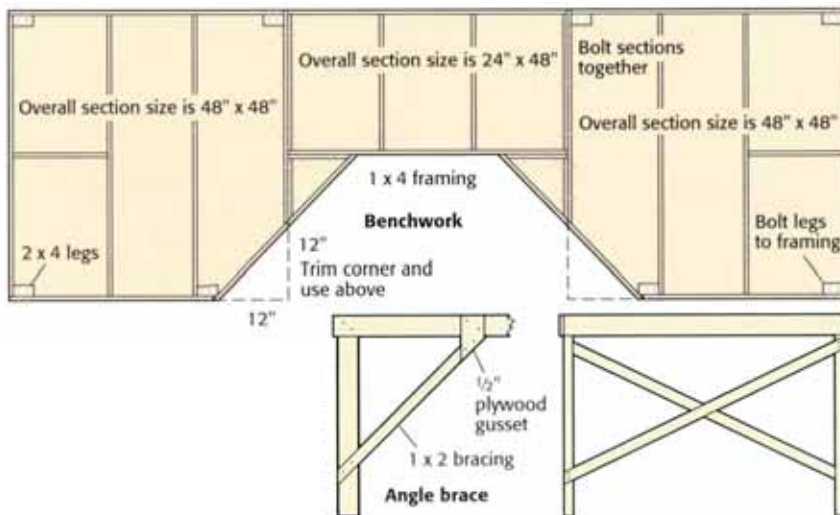
Cut the remaining roadbed for the upper level from another piece of plywood and support it on wood blocks.

### Wiring

Insulated joints and feeder connections are shown for operating the railroad from a conventional DC power pack. Two reverse loops are involved. Maynard siding should be wired so a second train can be held there until it's needed to switch cars at the junction.



ILLUSTRATIONS BY RICK JOHNSON



## Scenery

Most of this layout's scenery should be gently rolling hills with some foliage and level town areas. The raised grade should be built on a fill with occasional retaining walls near the bridges.

Minnesota doesn't have a lot of tunnels, so the portals under Clara City should be camouflaged. Install a highway bridge across the front of each portal and add foliage on top of the tunnel behind it so the train seems to disappear into a cut.

## Structures

A Central Valley truss bridge is used for the long span. This bridge's deck is 3/4"

thick so be careful to maintain a minimum clearance of 3" between the bottom of the bridge deck and the railheads below it.

The remaining structures aren't specified as there are numerous possibilities that will fit. Both towns should include six or eight small businesses.

## Equipment

Short lines generally operate with locomotives acquired from a nearby larger railroad. In this case, a single EMD GP7 or a yard switcher from the GN or any of the other nearby railroads would be perfect. Retain the original

## Bill of materials

### Atlas Model Railroad Co.

#### Code 100 Snap-Track

- 821 9" straight (34)
- 822 6" straight (5)
- 823 3" straight (4)
- 825 1 1/2" straight (1)
- 833 18"-radius curve (18)
- 834 1/2 18"-radius curve (1)
- 835 1/3 18"-radius curve (3)
- 836 22"-radius curve (26)
- 843 bumper (2)

#### Code 100 Snap-Switches

- 860 left-hand manual (2)
- 861 right-hand manual (1)

#### Code 100 Custom-Line switches

- 283 no. 6 left-hand manual (2)
- 284 no. 6 right-hand manual (3)

### Midwest Products Co.

- 3013 cork roadbed (25 3-foot pieces)

### Rix Products

- 101 vintage highway bridge (2)

### Walthers

- 3036 rural grain elevator (1)
- 3048 packing plant (1)
- 3047 stockyard (2)
- 3049 icing plant (1)

### Lumber

- 4 x 8 sheet of 1/2" plywood (1)
- 2 x 4 sheet of 1/2" plywood (2)
- 8-foot pine 1 x 4s (10)
- 6-foot pine 2 x 4s (4)
- 8-foot pine 1 x 2s (6)

### Hardware

- 3/16" x 2 1/2" bolts (14)
- 3/16" x 3" bolts (legs, 16)
- 3/16" nuts (30)
- 3/16" washers (30)
- 1 1/8" drywall screws (100-count box)

color scheme and engine number, but paint over the name and add CHC initials on the cab with decals.

## It's your railroad

Like most track plans, this one's intended to get your creative juices flowing. While our layout follows a specific theme, there's no reason why it couldn't be turned into a mining railroad, a logging and lumber system, or even a tourist line. It all depends upon the character you provide through the equipment and structures you put on the railroad. Be creative and try new ideas. After all, it's your railroad! 🚂

# The Atlanta Central

An HO layout designed for operation

By Keith Thompson



**W**hen most model railroaders start out they just want to watch trains run around an oval of track on a 4 x 8-foot sheet of plywood.

Often this layout is rebuilt or scrapped because watching trains going around a basic oval of track gets . . . well, boring! Model railroaders want operation to keep their interest up after the scenery, buildings, and details are in place.

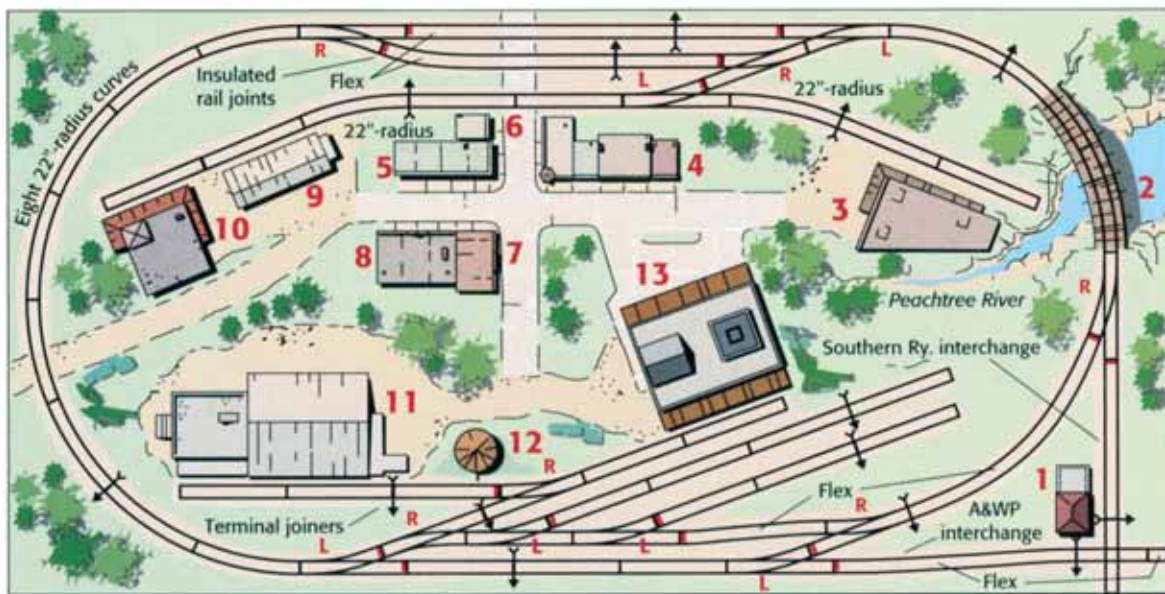
## Operation in a small area

The HO scale Atlanta Central is designed to start out as an oval for running trains. But as your interests evolve, the layout has a lot to offer operationally with its interlocking crossing and interchange yard.

Because of the tight curves on the Atlanta Central (18" minimum radius), we'll set the era in the late 1940s when freight cars were shorter. Those smaller

cars will look and operate better on tight curves. Small steam locomotives such as 2-8-0 Consolidations and 2-8-2 Mikados or early diesels such F3s or NW2s will work best for the same reason.

The premise behind the Atlanta Central is that it's a terminal railroad wholly owned by the Southern Ry. Since the Southern really owned several subsidiaries like this, the scheme is quite plausible.



## Atlas Model Railroad Co.

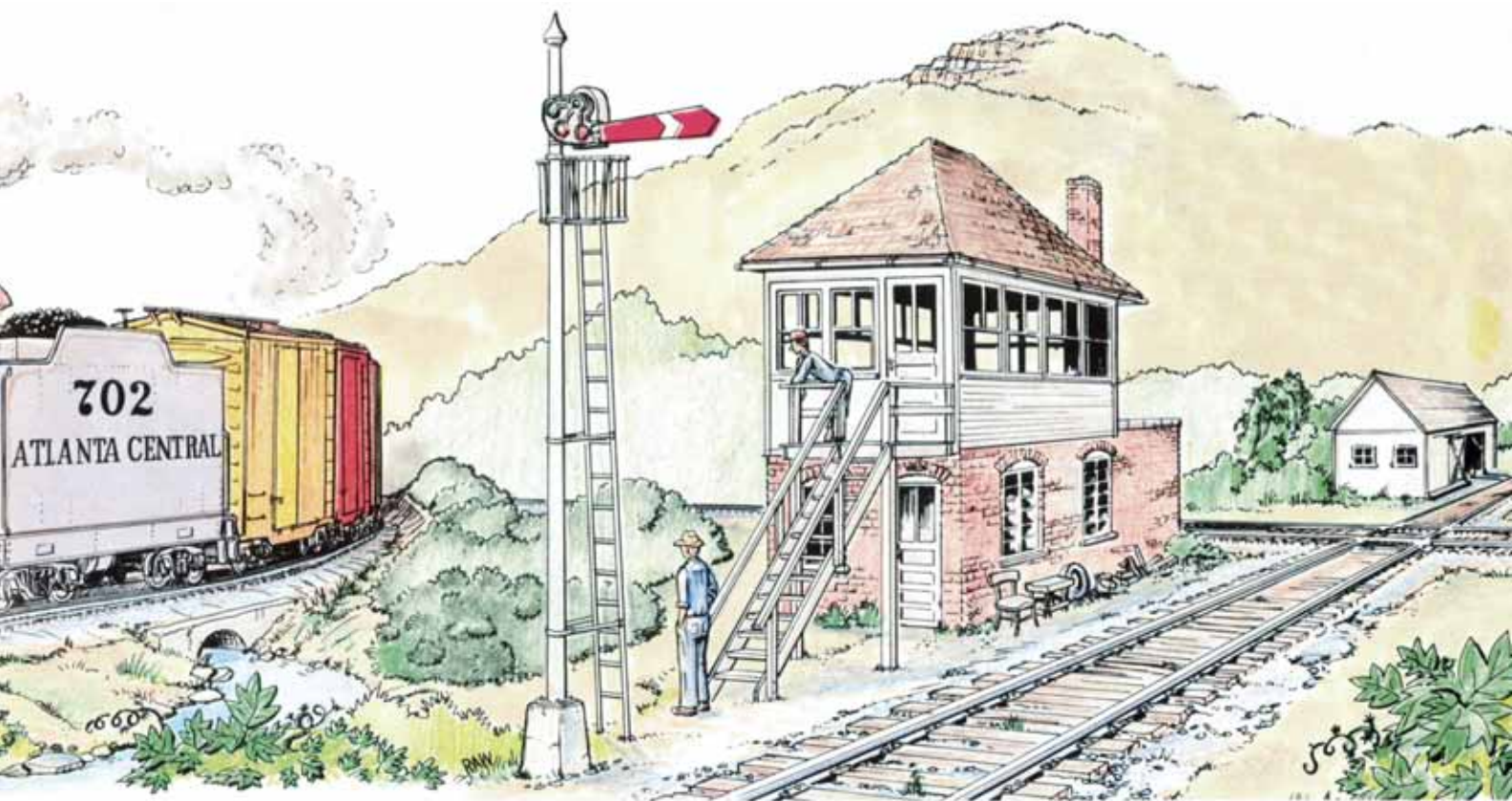
### Code 83 nickel-silver track

- 500 36" flex (4)
- 520 9" straight (23)
- 532 18" radius (3)
- 535 22" radius (10)
- 540 left-hand remote Snap-Switch (6)
- 541 right-hand remote Snap-Switch (6)
- 553 terminal joiners (14)
- 577 90-degree crossing

Unmarked sections are 9" straights or 18"-radius curves

Scale: 3/8"=1'-0"

ILLUSTRATIONS BY ROBERT WEGNER

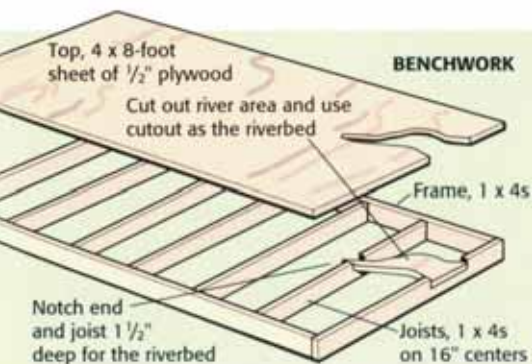


Freight cars are exchanged between the Southern and the Atlanta & West Point through the interchange yard near the crossing. Locomotives from both roads can be seen working in the yard, but the Atlanta Central is the only road that delivers cars from the yard to the local industries.

### Construction techniques

Building the Atlanta Central is really straightforward, with a 4 x 8-foot sheet of plywood resting on a frame of 1 x 4s that is supported by sawhorses or book-cases. The detail drawing below shows the basic benchwork.

The only tricky part of the benchwork is making the river. Cut out the plywood where the river goes, remove 1½" of the exposed 1 x 4s, and refasten the removed chunk of plywood as the



river base. Make the river banks from plaster-soaked gauze covered by a finish coat of Sculptamold. High-gloss varnish or two-part resins such as Enviro-Tex will make convincing water.

### Trackwork

All of the track is Atlas code 83 Snap-Track and flextrack. I chose the code 83 track (the rail is .083" high) because it looks more prototypical than code 100 (.100" high). Besides, lighter rail is more appropriate for the 1940s.

The Atlas 90-degree crossing helps increase the prototypical operations of the layout. The crossing, located near Howell Tower, is where the A&WP crosses the Southern Ry. Both of these railroads provide interchange traffic for the Atlanta Central.

There are a few pieces of flextrack in the plan. These are used because sectional track in these locations would require several pieces be cut to fit. Instead we'll only make two cuts on each piece of flextrack. If you feel comfortable working with it, flextrack could be used for the entire layout, eliminating a lot of the rail joints that sometimes cause electrical problems later.

### Room to grow

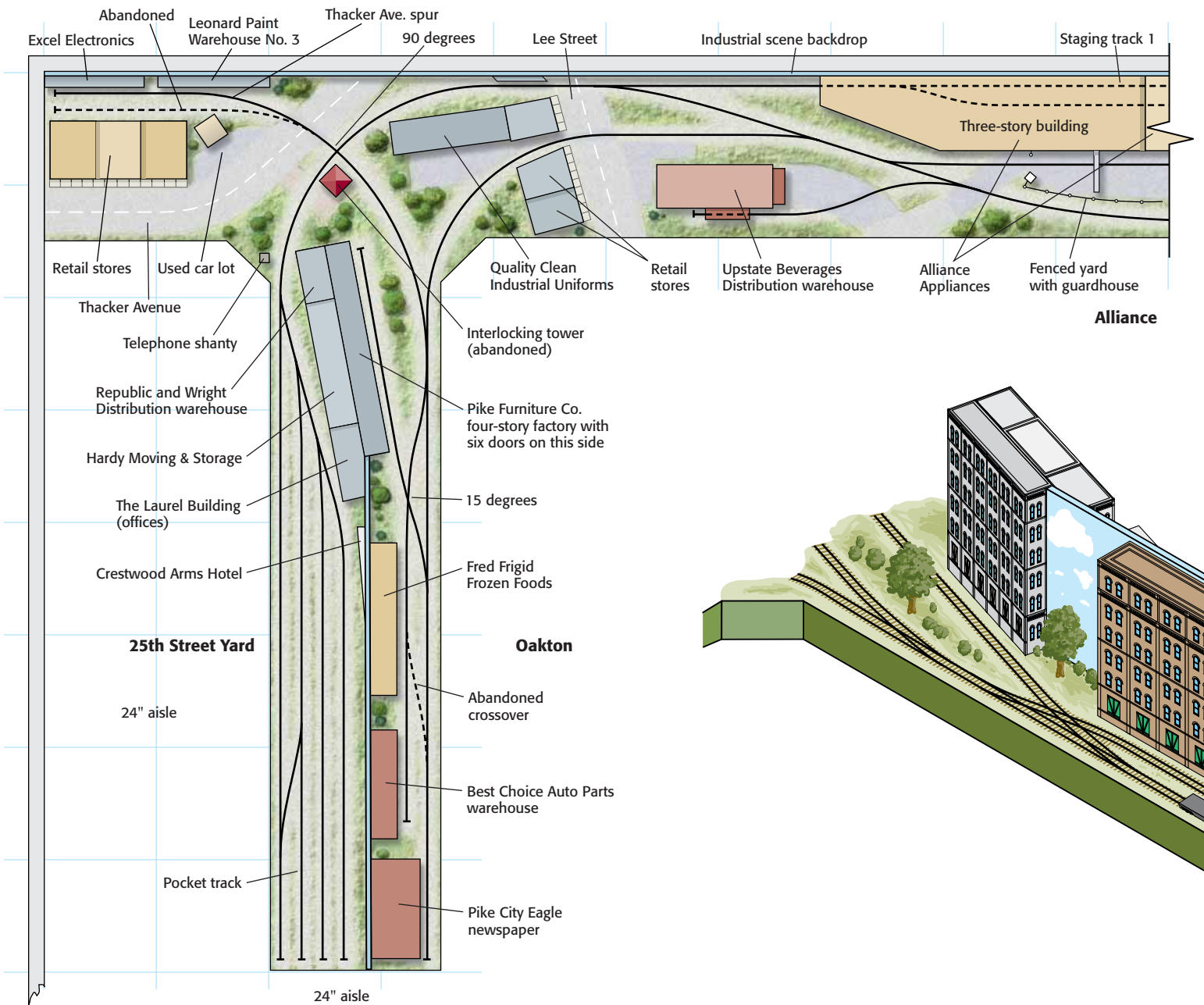
The Atlanta Central can be expanded by building extensions past the Howell Tower crossing. These extensions can

be yards, staging tracks, or even more-elaborate trackage running along the walls of the room to other destinations.

Let your imagination be your guide, and the Atlanta Central can be as great as the city it's named after. 🚂

### Structures

1. Atlas 704 signal tower (Howell Tower)
2. Campbell 303 curved trestle
3. Wm. K. Walthers 933-3095 Railway Express Agency
4. Wm. K. Walthers 933-3029 Merchant's Row II
5. Design Preservation Models 119 M. T. Arms Hotel
6. Design Preservation Models 202 Pam's Pet Shop
7. Design Preservation Models 204 Walker Building
8. Design Preservation Models 108 Goodfellows Hall
9. Atlas 750 lumberyard
10. City Classics 103 Smallman Street Warehouse
11. Wm. K. Walthers 933-3080 Miranda's Bananas
12. Bachmann 45153 water tank
13. Wm. K. Walthers 933-3044 Hardwood Furniture Co.



# The Pike City Belt Line

An 8 x 12-foot HO switching layout on a shelf

By Richard A. Nelson

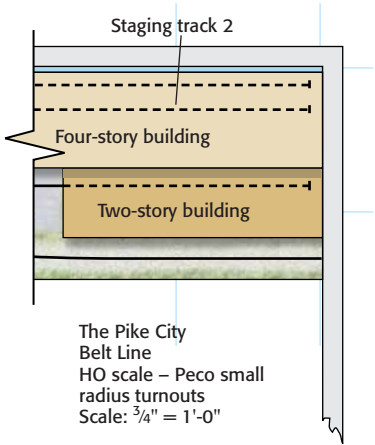
Here's a compact model railroad that provides a lot of interesting switching opportunities in a metropolitan setting. The Pike City Belt Line's linear design packs in four distinctly different switching locations and a small staging yard. A variety of scenic dividers separate the scenes and make the railroad seem larger than its 50 square feet.

This railroad is designed for a 10 x 12-foot room. One side fits against the long wall with the short leg extending out into the room. A 24" aisle provides access to the 25th Street Yard.

For portability, the railroad can be built in three sections 18" wide and 72" long following David Barrow's domino construction methods which were published in the September and October

1996 issues of MODEL RAILROADER. However, the railroad will need to be fairly tall so the double-sided structures can effectively separate the 25th Street Yard from Oakton.

This plan is designed for easy construction using Atlas flextrack and Peco small-radius turnouts. These turnouts are made with switch point toggle springs – ideal for manual operation.



The Pike City Belt Line  
HO scale – Peco small radius turnouts  
Scale: 3/4" = 1'-0"

ILLUSTRATION BY KELLIE JAEGER

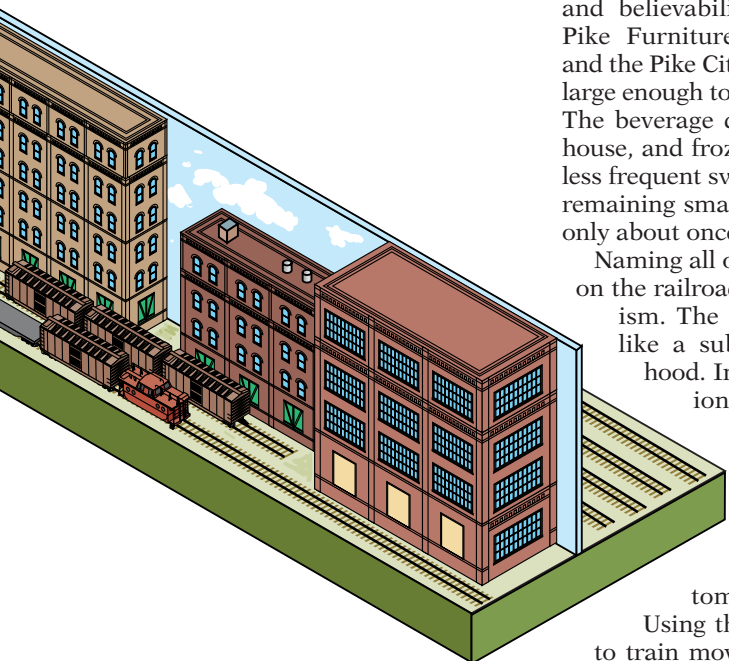


ILLUSTRATION BY TERRI FIELD

**Scenic challenge**

The major challenge in building this layout is in modeling the industries served by the PCBL. The structures located against the walls and scenic dividers can be simply built as flats. However, the appliance plant and furniture factory, both large structures, need some three-dimensional areas to look convincing.

Alliance Appliances should be large and busy-looking with a variety of roof lines showing additions through the years. It is more than 48" long to conceal the staging tracks along the wall. Where the track enters the building, a small section of loading dock detail can be used to mask the empty interior.

A two-sided building-and-scene divider separates the 25th Street Yard from Oakton. The Pike Furniture factory faces the Oakton side, while the opposite side of the structure represents the alley view of three other businesses, which aren't serviced by the railroad. This large structure also provides a three-dimensional transition into the city backdrop that divides the rest of the peninsula.

**Enhancing realism**

The quantity and sizes of the industries on the PCBL enhance its realism and believability. Three businesses – Pike Furniture, Alliance Appliances, and the Pike City Eagle newspaper – are large enough to require daily switching. The beverage distributor, paint warehouse, and frozen food plant will need less frequent switching, while the other remaining small industries are worked only about once a week.

Naming all of the different locations on the railroad also enhances its realism. The "Oakton" name sounds like a suburb or city neighborhood. In typical prototype fashion "Thacker Avenue" refers to an area near a city street or some other similar landmark. "Alliance" comes from the name of the major customer at that location.

Using these names in reference to train movements will add prototypical flavor to an operating session.

Most switch jobs have an official job number or name, but many prototype railroaders create their own nicknames for these runs. Some typical names for the PCBL's switch job might be the 25th Street Switcher, the Thacker Avenue Job, or the Oakton Turn. The "turn" reference in the name means the switch job goes out, works, and then returns to its starting point.

**A day on the PCBL**

Let's follow a PCBL switch crew as they go to work. Their engine, five cars, and a caboose are spotted on staging track two, which represents the main PCBL yard in another part of Pike City. This eliminates the need for an engine

terminal and allows you to use a variety of switchers or Geeps.

The engine pulls its train past the abandoned interlocking tower and into the 25th Street Yard. There, the cars are sorted and organized for delivery as both facing and trailing point switch moves are involved.

Next, the crew begins visiting the various industries to pick up the outbound cars. A caboose is necessary to provide a safe platform for the crew as cars are shoved across busy streets.

While the switcher is away from the yard, a transfer run pulls in from staging track one. It arrives on the front track so the engine can escape. After the runaround move is done, the transfer job shoves its cars into an empty track and the engine is parked in the pocket track while the crew heads for lunch.

When the PCBL switcher returns, it gathers the outbound cars for the transfer job. By then, the transfer crew has returned so they couple onto their train, make a brake test, and depart into staging track one.

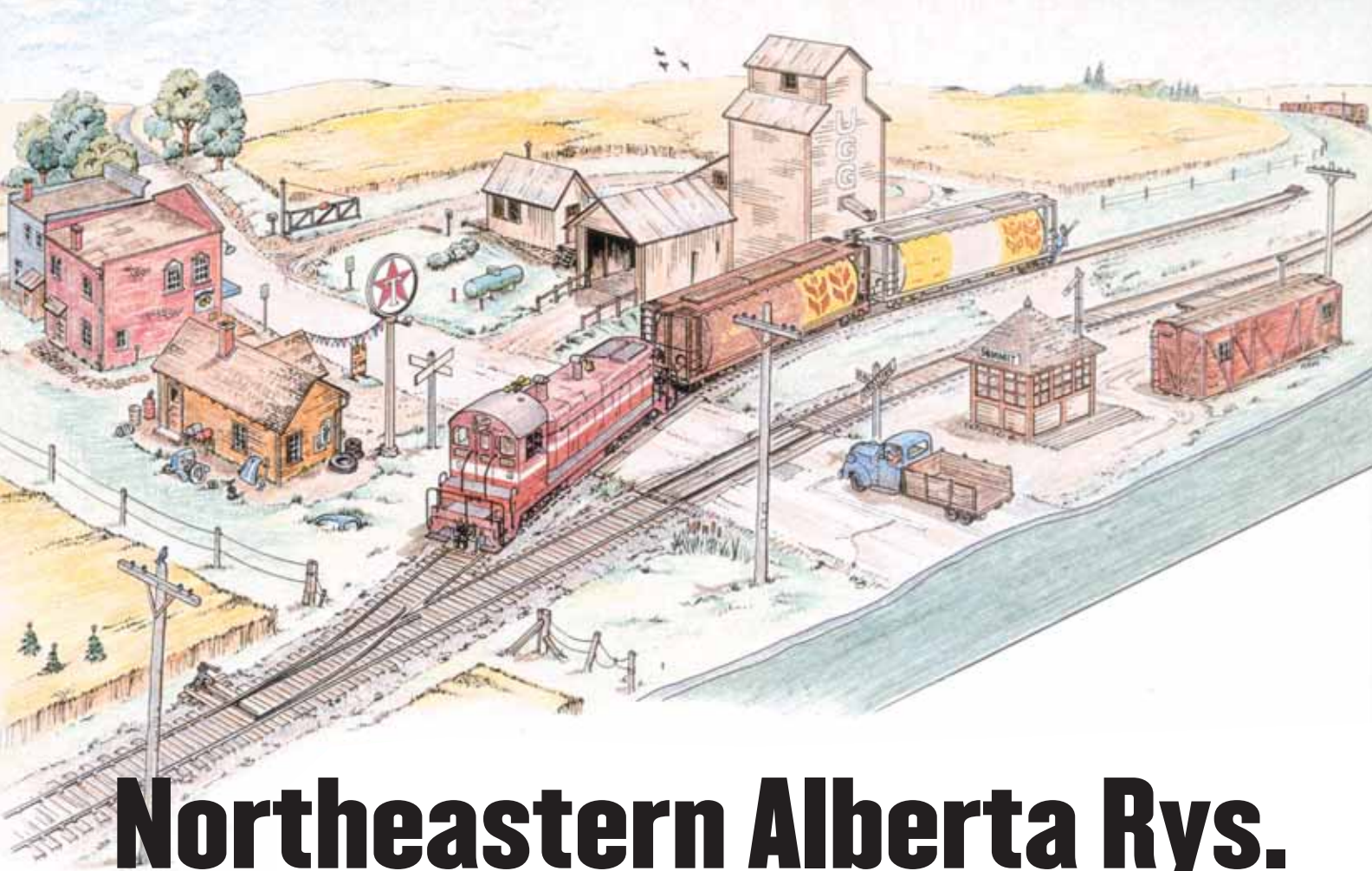
Next, the PCBL crew sets two cars and the caboose on the front track while the switcher runs through the escape track to get behind them. It now shoves the train, caboose first, across Lee Street and into Alliance. Then it reverses direction and pulls the cars across Lee Street again and around the curve into Oakton. The caboose is left on the Lee Street curve while the crew shoves the two cars across Thacker Avenue and spots them at Excel Electronics and the Leonard Paint Co.

When it returns to the yard, the switcher gathers its outbound cars. An air test is made, and then the train clatters across the diamond and heads into staging track two. Between operating sessions, you'll need to back the trains out and rearrange their consists with extra cars that are stored nearby.

**Optional additions**

There's space to add a third staging track within the appliance plant to intensify operations. However, expanding the number of industries may be counter-productive. You don't want tracks to fill every bit of real estate. Instead, I'd change a few industries to ones with higher volumes of traffic that need more switching.

As it is, the PCBL will give you an idea of what switching is like in a metropolitan area. The layout will provide many hours of excitement and constantly changing switch moves that will challenge both newcomers and veteran model railroaders. ♣



# Northeastern Alberta Rys.

HO scale Canadian prairie railroading in a 4 x 8-foot track plan

By Greg Panas

**T**his track plan will give you ideas on how to improve an otherwise ordinary 4 x 8-foot HO layout. The Northeastern Alberta Rys. (NEAR) is set in the farmlands east of Edmonton. Most of the NEAR's traffic is agricultural goods, shipped out of the region on the Canadian National's Edmonton to Lloydminster, Alberta, line.

At Mann Lake, the layout's operational center, there is a short passing track and a good-sized frame depot. On the opposite side of the backdrop, a small passenger shelter and storage shed mark Royalite, a village that largely owes its existence to the United Grain Growers elevators. In addition, a spur leaves the main line at this point to connect with a drop-leaf fiddle yard.

## Track plan

The plan is designed to use Atlas no. 4 Custom-Line turnouts and 18"-radius curves on the main line. However, I decided to give the fiddle yard lead a 30"-radius curve. The tracks, roads, and backdrop run at angles to the benchwork edges for visual effect.

## Setting the scene

The scenery should suggest gently rolling farmland dotted with clumps of white poplar and evergreens. The trees are used to disguise the backdrop openings the trains will pass through. To model the tall prairie grass, I'd try the method that Eric Bronsky described in the book *Scenery Tips & Techniques*, published by Kalmbach (books can be purchased by telephone at 800-533-6644 or by e-mail to [customerservice@kalmbach.com](mailto:customerservice@kalmbach.com)). For an illusion of greater depth on each side of the backdrop, the fur's texture and coloring could be evened out slightly toward the rear of each scene.

## Detailing

One advantage of a small layout is that you can go all out on detail with a lot less work than on a larger system. Mann Lake and Royalite should look as though they've been around a while. Plant flowers in the ditches and tall weeds as appropriate, and load the roads and parking lots with as many vehicles for your chosen era as you can

lay your hands on. Firsthand observation and photos of the prototype area will give you many great ideas.

## Operation

Without a fiddle yard, operation on the NEAR would be hampered by the lack of a runaround at Royalite and by the lack of someplace for the train to go other than around the oval. The fiddle yard helps solve both problems.

The yard is a 6" x 36" shelf attached drop-leaf style to the end of the layout, with a length of track to connect the spur with Royalite junction. The spur represents the interchange with CN.

You'd begin a typical day's operation on the NEAR by assembling a train in the fiddle yard and running the train through the junction onto the main.

After running a fixed number of laps around the oval, you'd stop the train at Mann Lake, having reached the modeled "end of the line." You'd switch the two industries here and run the engine around by way of the short passing track. If there are more than just a few cars in the train, it could take a couple



of trips through the siding to get the locomotive and caboose on opposite ends of the consist. If you're sharp you'll remember to keep any cars bound for Royalite blocked next to the engine for the trip back.

When ready to return you'd start the train out and run half the number of laps around the oval that you used to reach Mann Lake; the train could then arrive in Royalite. After you switch the elevators, you'd take the train out again for a similar number of laps before taking the junction turnout and ending the run back in the fiddle yard.

### Equipment

The NEAR's equipment should be representative of a prairie branch line. For the steam era, 40-foot boxcars would be dominant on the freight roster, with an assortment of tank, flat, and refrigerator cars added for variety. A 2-6-0 Mogul or 4-6-0 Ten-Wheeler would be typical of locomotives used on the prairie branch lines.

For a modern-era NEAR you'd want a small fleet of government-owned cylindrical grain hoppers. An EMD switcher or a Geep would do nicely to stretch the slack.

The NEAR's sharp curves put it in the freight-only category for most modelers, but for the steam era a short combine at the end of the train might be used to offer mail, express, and passenger service to the prairie villages.

### Simple but fun

The NEAR is simple and small, but has the potential for success. No matter which era the layout is set in – from steam to diesel – you'll have hours of enjoyment rolling grain trains through the Canadian prairies. 🚂

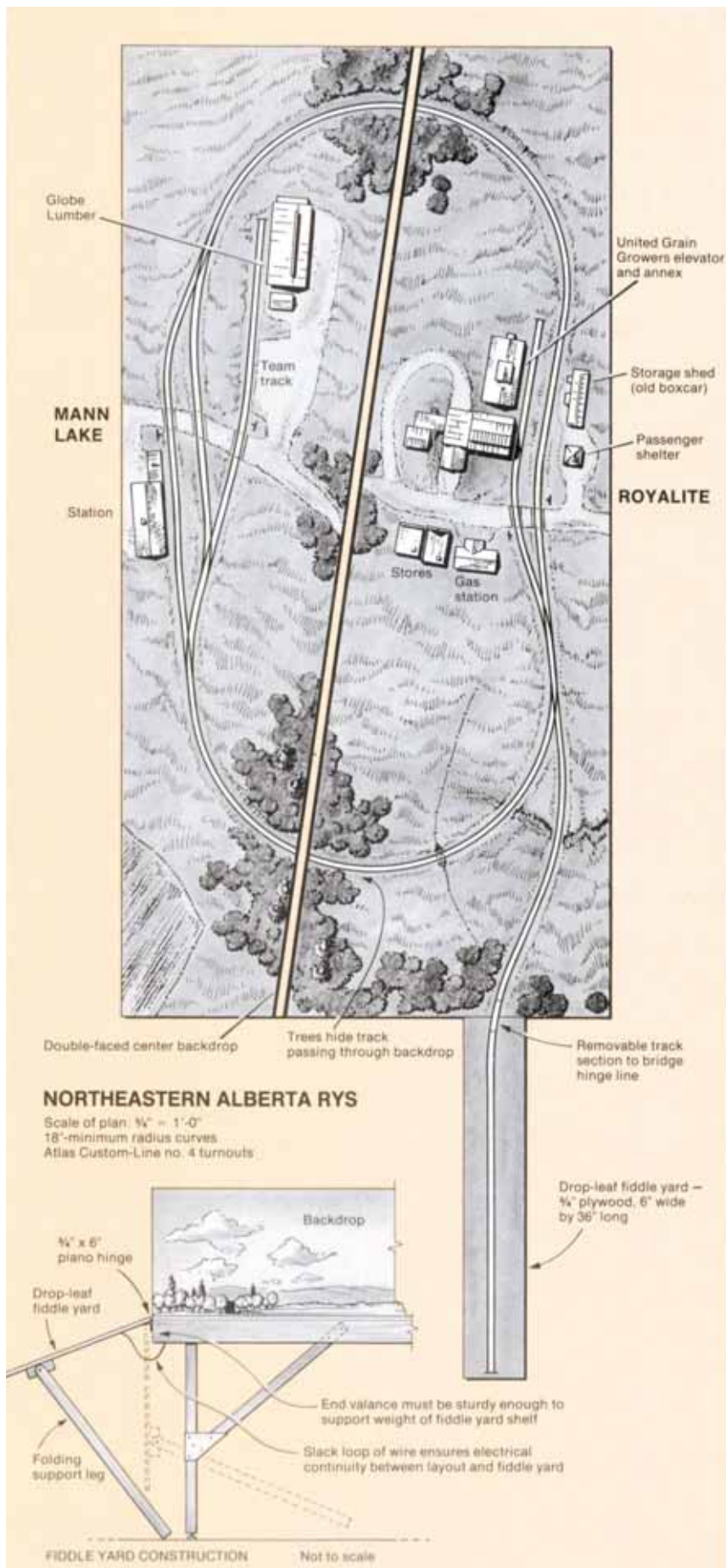
### Suggested building kits

#### Mann Lake

Lumber Co., Atlas no. 750  
Station, Wm. K. Walthers 933-3063

#### Royalite

Gas station, International Hobby Corp. no. 4108  
Passenger shelter, Atlas no. 701 (use without tower supports)  
Storage shed, Con-Cor no. 9033  
Store, Design Preservation Models 116 Carr's Parts  
Store, Design Preservation Models 102 Robert's Dry Goods  
Grain elevator, Campbell no. 384 with no. 449 storage bin

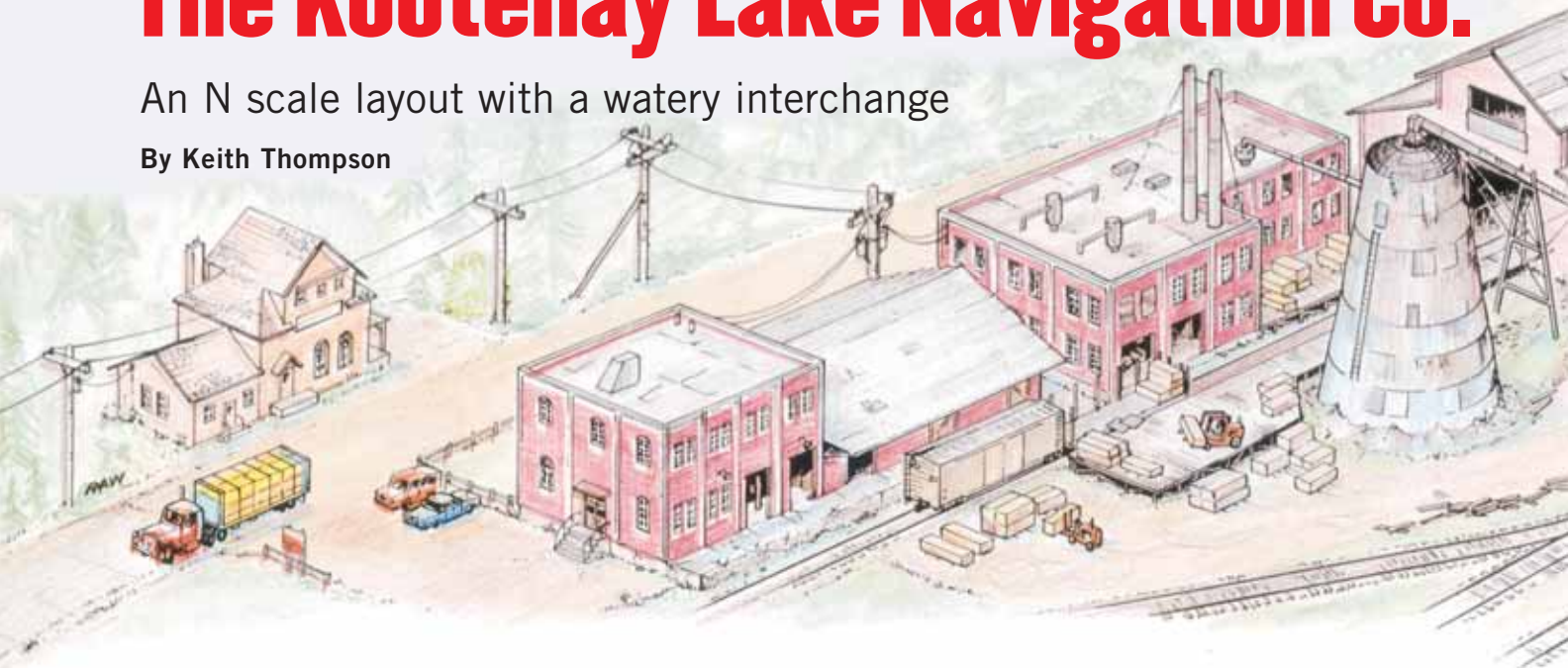


ILLUSTRATIONS BY ROBERT WEGNER

# The Kootenay Lake Navigation Co.

An N scale layout with a watery interchange

By Keith Thompson



Oval track plans are popular for first layouts or tight spaces, but they're often outgrown as their builders realize the implausibility of a closed-loop rail system. Railroads, even model ones, need interchange connections to survive. Here's an oval plan for a branch line using a barge to connect with the outside world.

## An isolated history

To reach isolated railroad branches along glacial valleys, the Canadian Pacific used to have several car ferry

operations on lakes in British Columbia. Instead of transferring loads from freight cars to ships, the railroad loaded the cars onto ferries or barges.

The last of these operations, on Slokan Lake, used a barge and a tugboat. The whole train was ferried up the lake to work a branch from Rosebery to Naksup and New Denver.

## The Kootenay way

Our N scale layout is loosely based on the CP barge operations on Kootenay Lake. The barge was used between

Procter and Lardeau, B. C. At Lardeau the train took to the rails again on the branch north to Gerrard.

The main industry in this part of Canada is lumber and wood products. There's also a little agriculture to the east so we'll use some modeler's license and add a grain elevator to give more variety in freight cars.

## Construction considerations

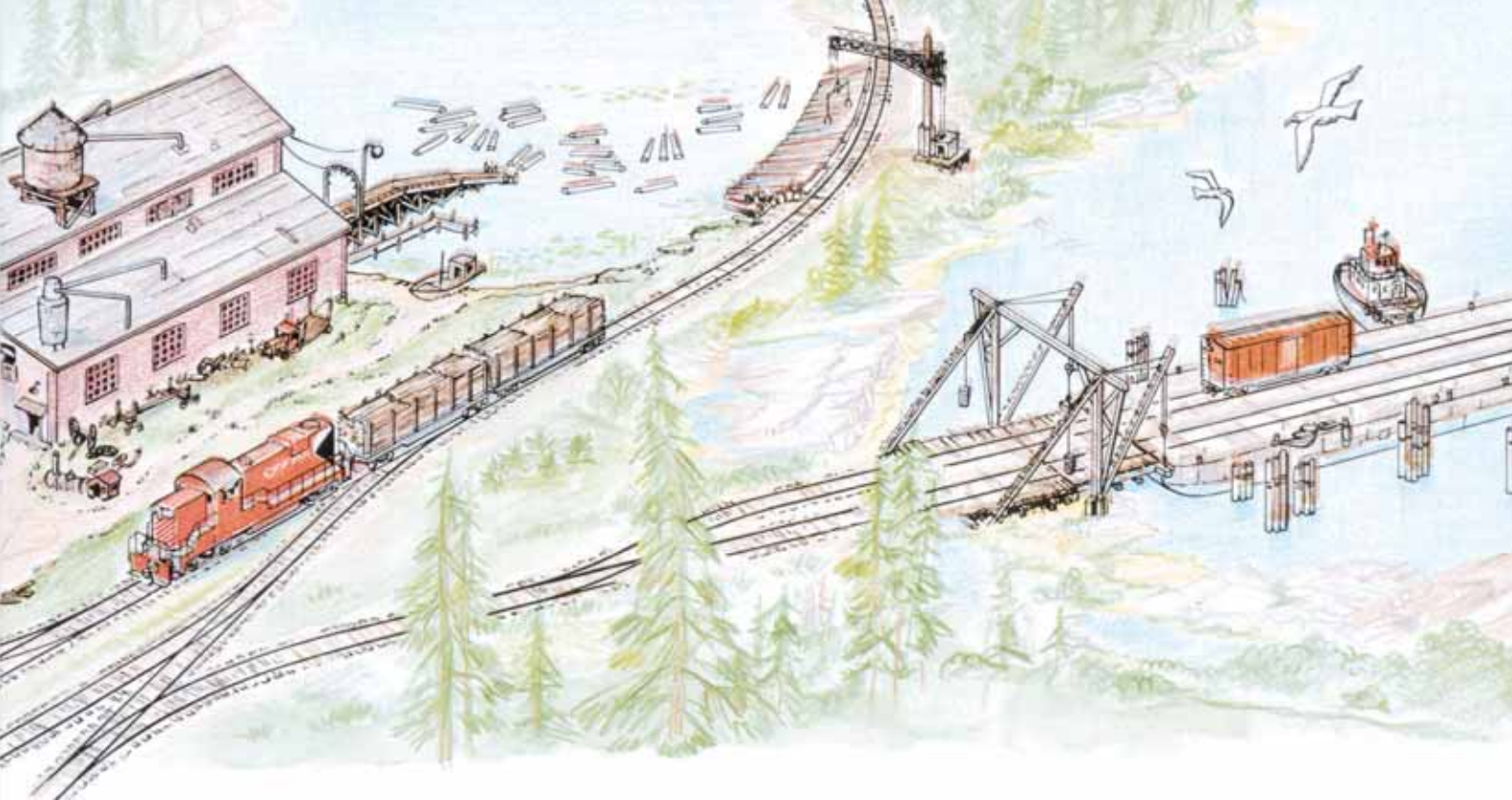
The Kootenay Lake Navigation Co. layout has a 2"-thick extruded foam board base. A piece of 1"-thick foam is



STEVE PATTERSON

## Structures

1. Model Power  
1522 gantry crane
2. American Model Builders  
610 grain elevator
3. Design Preservation Models  
514 Erik's Emporium
4. Wm. K. Walthers  
933-3224 Merchant's Row II
5. Life-Like  
7463 country store
6. Wm. K. Walthers 933-3201  
Water St. Freight Terminal  
(lumber mill main office)
7. Design Preservation Models  
506 Gripp's Luggage Mfg.  
(millwork warehouse)
8. Wm K. Walthers 933-3236  
Mountain Lumber Co. Sawmill  
(main mill building and  
slash burner – 9)



used on top of the thicker piece to raise the subroadbed above lake level. The foam makes the layout light and easy for one person to move.

The 3 x 6-foot size was chosen so the railroad can go through just about any doorway. Because foam board comes in 4 x 8-foot sheets, you'll have some material left over after you trim it to its finished size.

The leftover foam pieces can be carved and piled in layers to make the ridge that serves as a view block down the middle of the layout. Figure 1 shows how this is done. Use a Stanley Surform rasp to give the mountain and the edges of the lakes their finished shape.

The finished layout can be set on a dining room table for operation and stored under a high bed or in a closet. However, if the layout doesn't need to be moved around, you can make it more permanent by attaching it to a pair of shelving units.

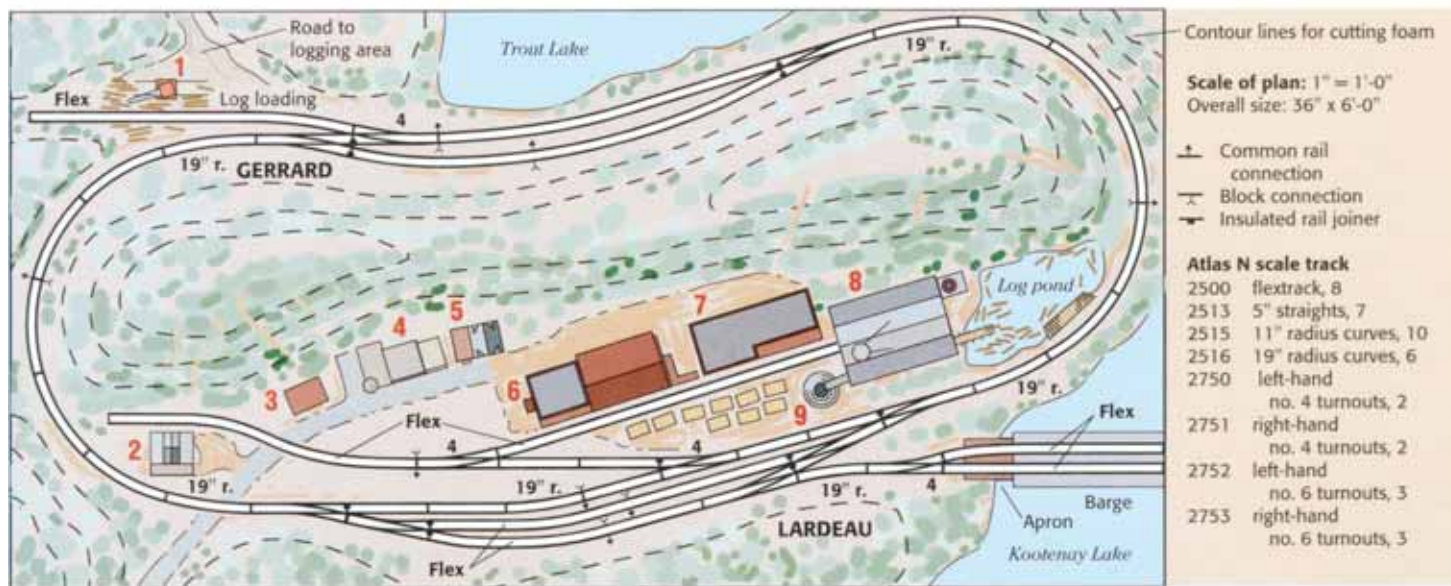
### Trackwork and wiring

The track plan combines Atlas N scale sectional and flextrack. Start by laying the sectional track through Lardeau and the two half circles, and then cut the flextrack sections to fit. All of the straight track sections are 5" long and unmarked curves are 11" radius. Unmarked turnouts are no. 6s.

You can use latex Liquid Nails to attach the cork roadbed to the foam board and lay track on that, or you can use self-adhesive roadbed, such as AMI's Instant Roadbed.

Since the KNC would probably only need one locomotive at a time, you can wire this railroad without any electrical blocks. However, you can run two trains independently with cab control or Digital Command Control (DCC). The plan shows insulated rail joiners and feeders for blocks with common rail wiring for cab control.

For more information on common rail wiring and using flextrack, take a look at the Kalmbach book *Beginner's*



ILLUSTRATIONS BY ROBERT WEGNER

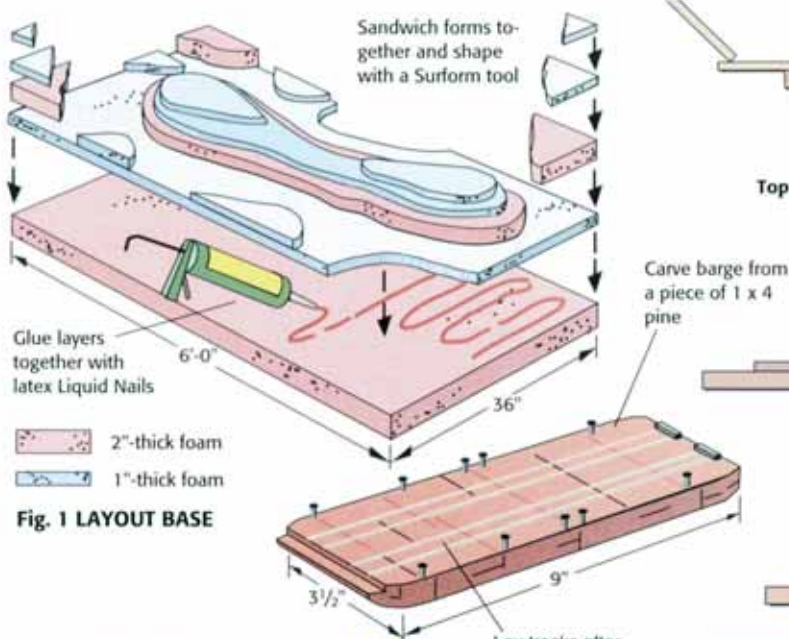


Fig. 1 LAYOUT BASE

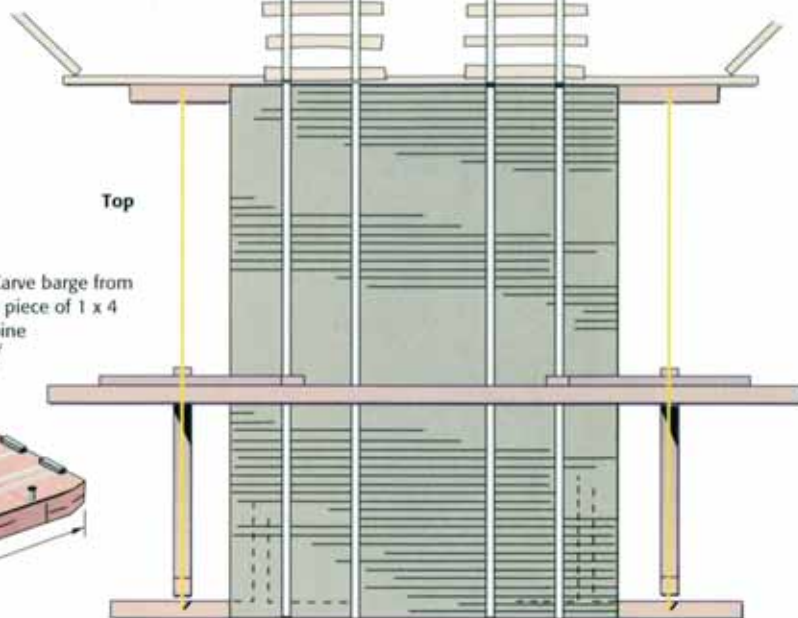
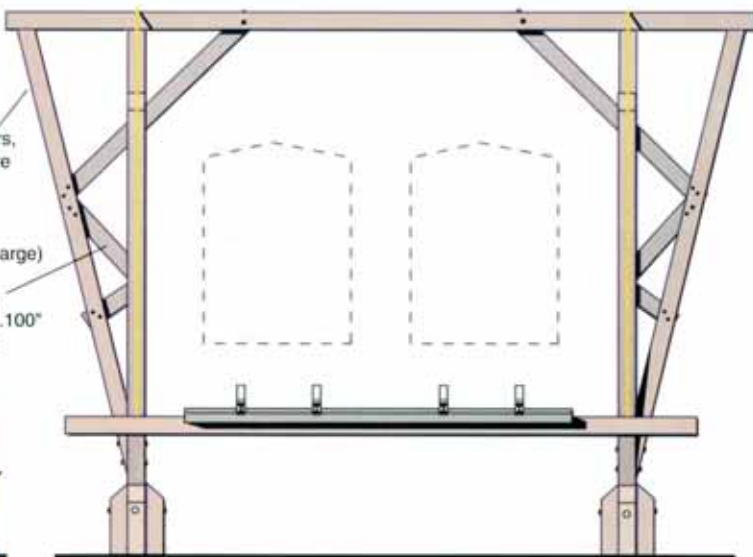
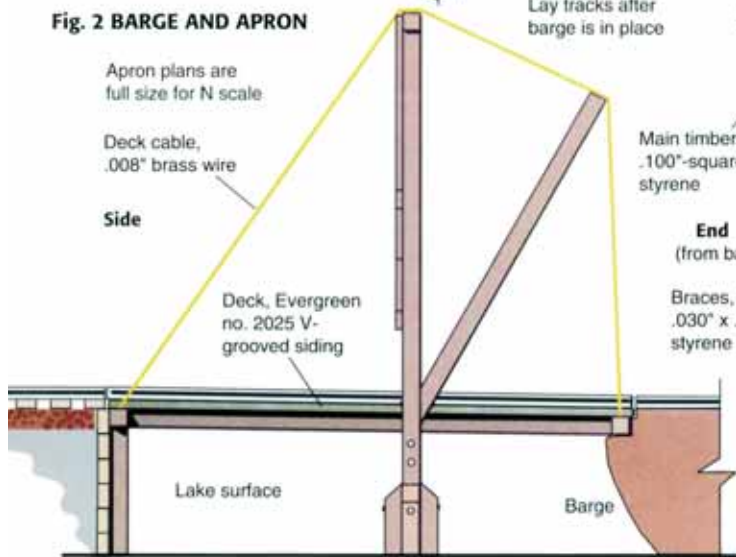


Fig. 2 BARGE AND APRON



*Guide to N Scale Model Railroad*. It's available at your hobby dealer or direct from Kalmbach by calling 800-533-6644 or by e-mailing customerservice@kalmbach.com.

### Locomotives and cars

A GP7 or GP9 will fit right in on the KNC. Freight cars for the lumber mill should be either double-door boxcars or bulkhead flatcars, depending on the era you're modeling. Log-hauling flatcars are also needed to get the timber from Gerrard to the mill pond.

The grain elevator would use 40-foot boxcars in any era up through the 1970s. You can substitute Canadian cylindrical hoppers if you want to model modern operations.

### Structures

Because there are no kits for the barge or the landing, you'll have to

make them on your own. The barge can be carved from a piece of 1 x 4 pine, as shown in fig. 2. Once it's set in the water, made from plaster or epoxy, the 3/4"-thick board will be just below the layout's average railhead elevation, typical of real barge operations. Make the barge's landing apron from styrene strip, rail, and wire, as shown in fig. 2.

The rest of the structures are commercial kits. Four are used to make the lumber mill complex big enough to justify rail shipments. Paint all of the lumber buildings similar colors so they look like they belong to the same owner. You'll also need to dig out a roughly 1/2"-deep mill pond with a Surform rasp. Add a log dump by the tracks and a ramp up to the mill.

### Operations

A workday on the KNC begins with the locomotive pulling its train off the

barge and into the yard. Next, the locomotive grabs empty log cars waiting there and heads for Gerrard. Here, the crew exchanges the empties for loads, which will be dumped into the mill pond at Lardeau.

With its logging duties done, the crew swaps empty boxcars for loaded ones at the lumber mill. The grain elevator also gets switched at this time, if it is necessary.

Finally, the outbound cars, caboose, and engine are switched onto the barge for the trip back to the main line. Keeping this weight evenly divided between the two tracks so as not to capsize the barge makes for interesting work.

The Kootenay Lake Navigation Co.'s barge connection shows how easily you can have an interchange on an otherwise closed-loop railroad. It's also a great excuse for moving a variety of rolling stock on and off a small layout. ♣