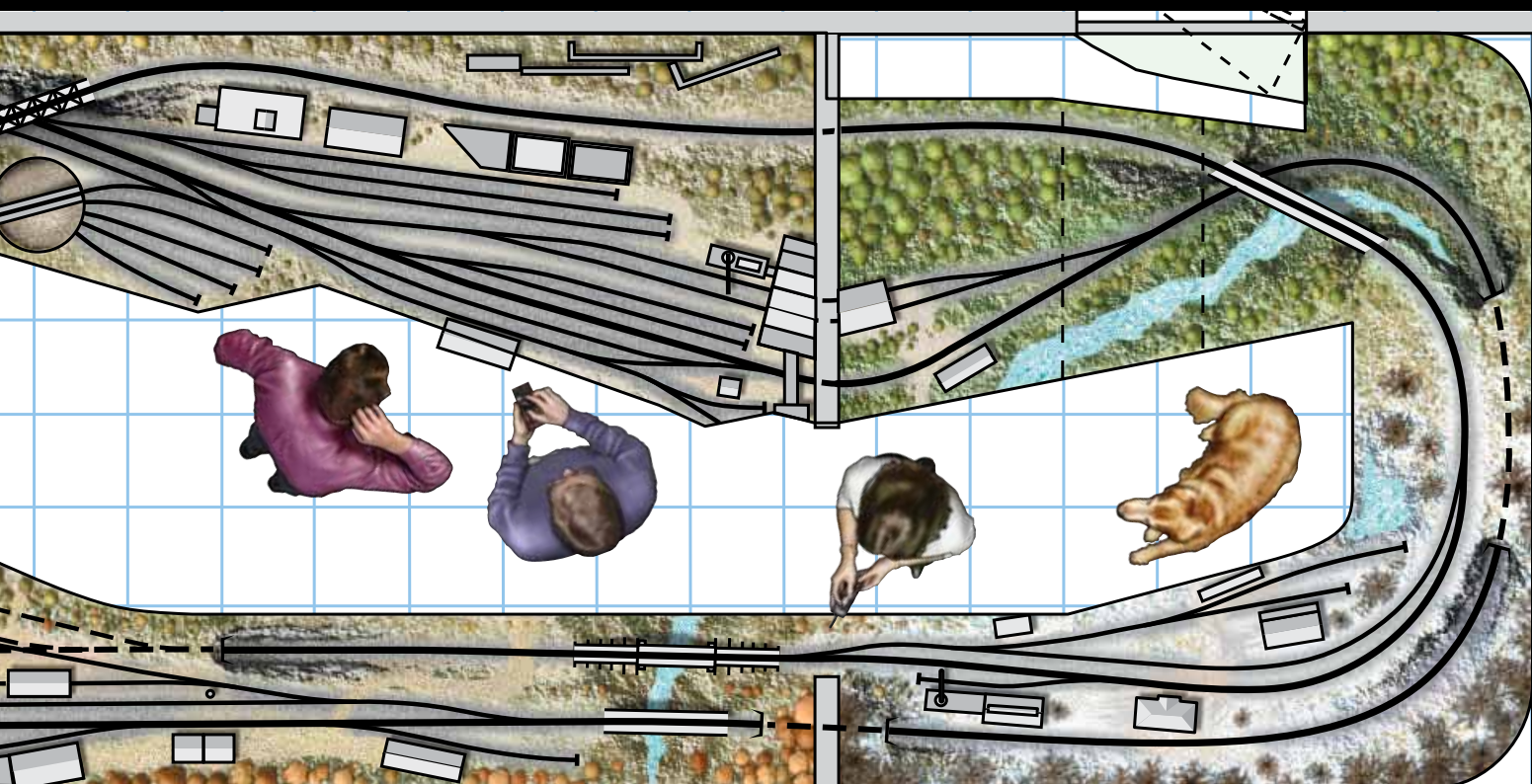


Workshop tips

★★★ INCLUDES ★★★
EDITOR'S CHOICE
★★ TRACK PLANS ★★

28 track plans for medium-sized spaces



- Layouts for 130 square-foot spaces and larger
- Designs provide minimum radius and turnout information
- All track plans include a scale grid for construction reference
- Plans for standard and narrow gauge layouts

618247

Medium layouts

Got some space to stretch out? Find some ideas here

By Steven Otte



It's always winter in the town of Phil's Church on Bill Henderson's Coal Belt RR (plan 1, below). A medium-sized layout space gives you room to experiment with techniques, such as a railroad that travels through all four seasons.

The modeler lucky enough to have more than a bedroom for his railroad has some choices to make. Do you fill the space with enough main line to enable long runs and trains of prototypical length? Build a big yard or add a bunch of industries for lots of switching action? Stretch out the track between cities to make more room for scenery?

There are as many approaches to layout design as there are spaces in which to build. For example, compare the Wisconsin Central, plan 3, with plan 15, the Dakota Northern. Both are N scale, have a similar footprint, and occupy rooms close to the same size. But while the Dakota Northern's plan emphasizes continuous running and yard switching, the Wisconsin

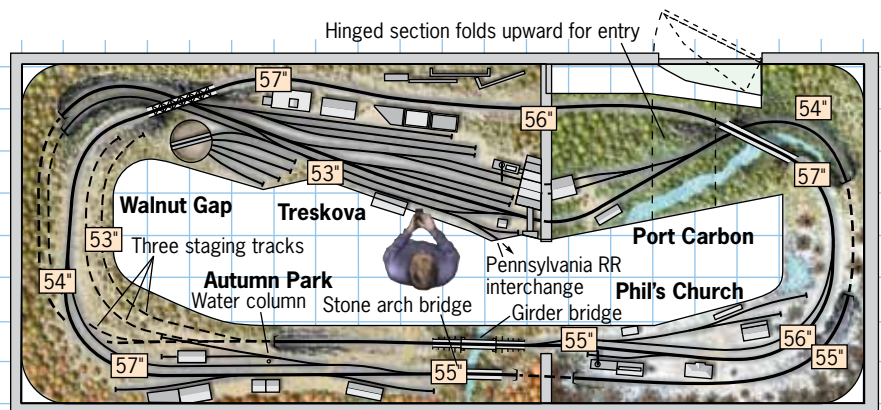
Central's single-track main allows for more scenery and realistic local-freight operations.

As you take a look through these plans, you may find one that's right for you. (As you'll see by the Editor's choice boxes, most of the *Model Railroader* staff has picked favorites.) But even if you don't, you may still find something that will inspire your next layout.

Coal Belt

Published: *Great Model Railroads 2002*
Scale: HO (1:87.1)
Plan size: 8 x 20 feet
Minimum radius: 24"
Minimum turnout: no. 6
Maximum grade: 2.5 percent

1



Scale of plan: $\frac{7}{32}$ " = 1'-0", 12" grid

Illustration by Rick Johnson

As your train runs counter-clockwise around this layout, you will be moving not only through scenery depicting Northeastern coal-mining territory,

but also through the four seasons of a year. Spring is always in full bloom in Port Carbon, while it's always winter in Phil's Church. Many modelers pick

summer or fall for their layouts because it's easy to landscape, but a well-done winter scene can have a beauty of its own.

Bay Point & Diablo

2

Published: May 2005
Scale: On2½ (1:48)
Plan size: 11 x 12 feet
Minimum radius: 24"
Minimum turnout: no. 4 (yard), no. 5 (main)
Maximum grade: 5 percent

Narrow gauge railroading appeals to a lot of modelers for different reasons. Some like the look of the intricate steam engines and rugged terrain that characterize many such lines. Others like that the smaller rolling stock and tighter curves allow them to pack more railroad into a smaller space. Modelers who want the size and detail of O scale, but don't have an empire-sized space for their layouts, often find a compromise in narrow gauge. This On2½ plan models a short line linking mine country to a port city.

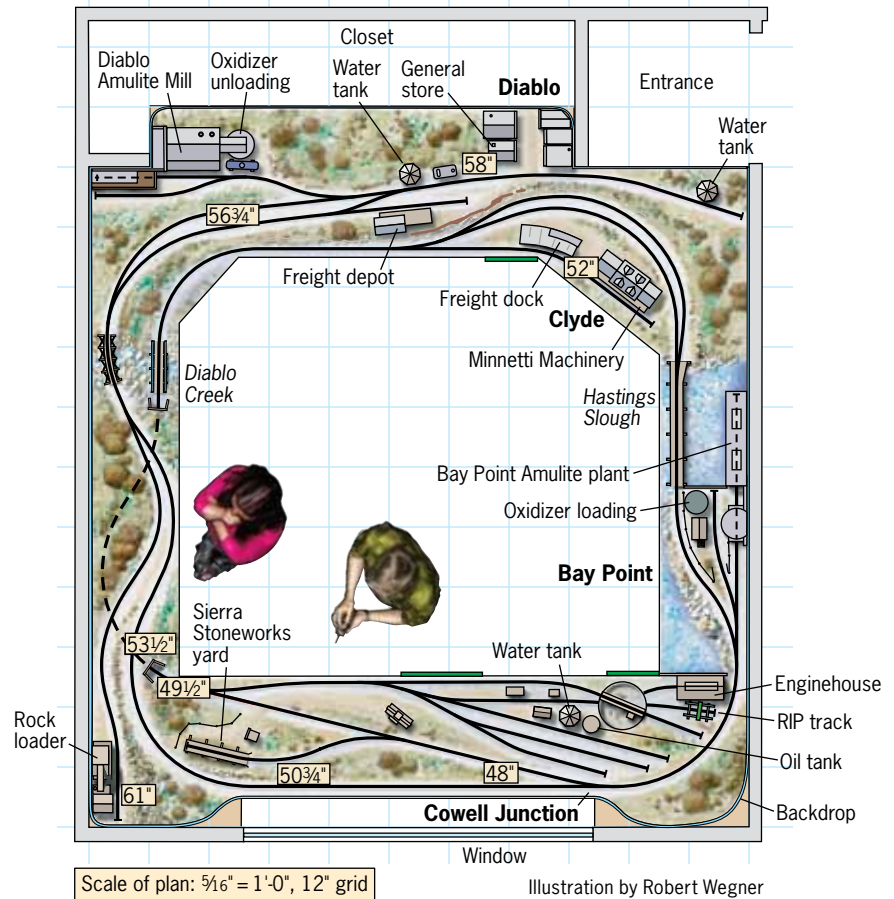


Illustration by Robert Wegner

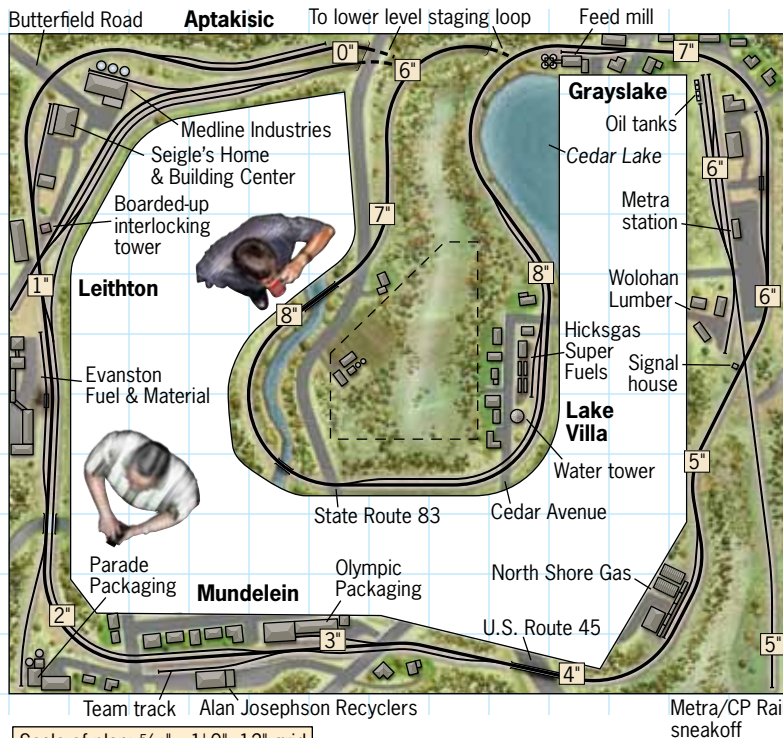


Illustration by Kellie Jaeger

Wisconsin Central

3

Published: October 2005
Scale: N (1:160)
Plan size: 11 x 13 feet
Minimum radius: 14"
Minimum turnout: no. 5
Maximum grade: 4 percent

Just because your trains are small doesn't mean your scenery has to be. This plan models the broad vistas of Midwestern farm country in 1995. The modest space requirements of N scale means room for big industries, forested hills, farm fields, a working interchange, and even a stretch of suburban commuter line. Double-ended staging looped under the central peninsula allows realistic point-to-point operations.

Onion Valley Mining & Lumber

4

Published: July 2005
Scale: HO and HO_N2½ (1:87.1)
Plan size: 14 x 20 feet
Minimum radius: 18"
Minimum turnout: no. 5
Maximum grade: 4 percent

Another Southwestern mining railroad like plan 2, the Onion Valley is two layouts in one: the standard gauge main line in the valley, and the narrow gauge mountain line that delivers ore to the stamp mill. The line is designed to fit around two walls of a garage. If the layout is mounted high enough, a modeler could suspend the end of the peninsula from the ceiling, leaving room for a sports car to park underneath. Staging on a traversing table represents connections to the outside world.

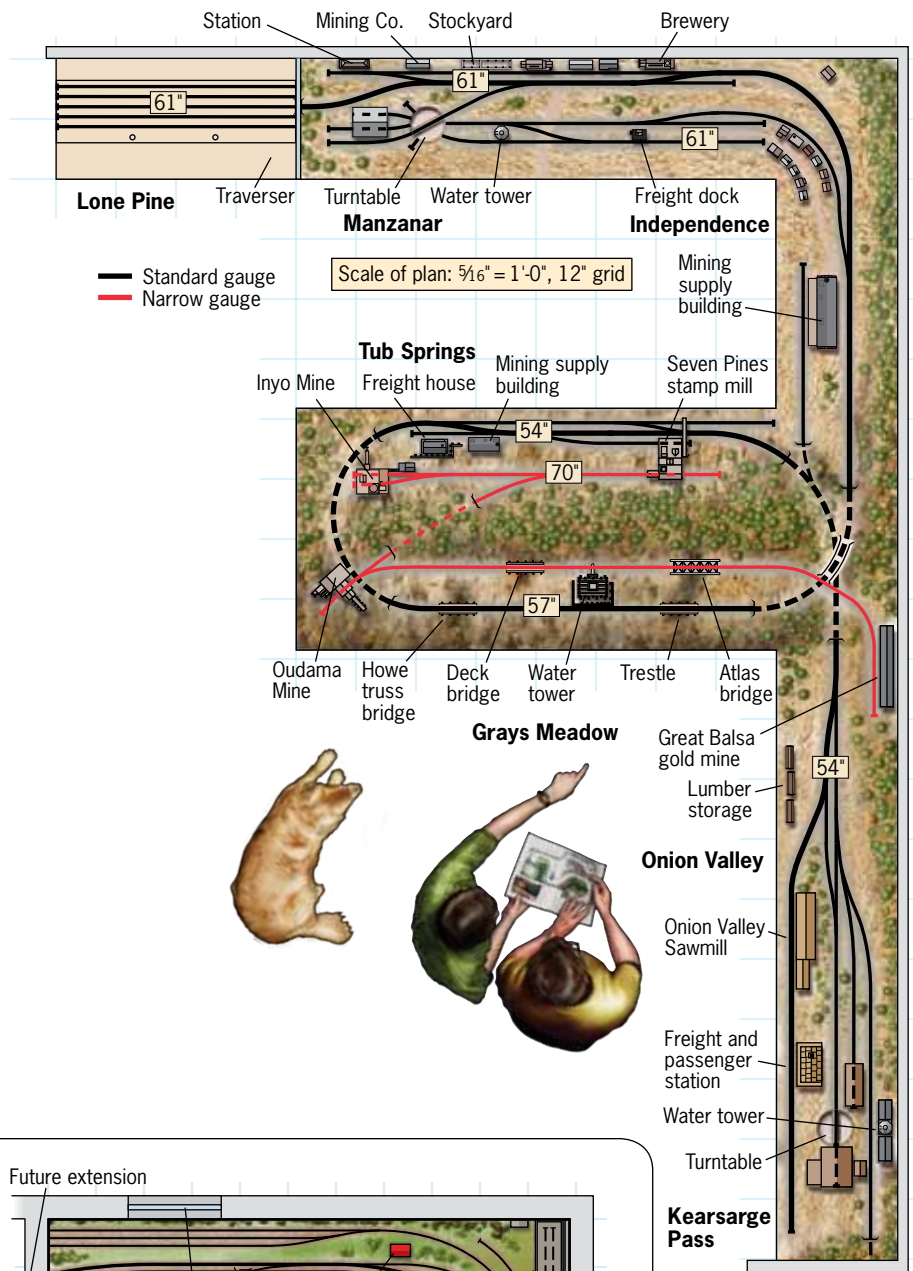


Illustration by Jay Smith

Prokhorovsk

5

Published: November 2005
Scale: HO (1:87.1)
Plan size: 11'-4" x 13'-8"
Minimum radius: 30"
Minimum turnout: Peco large radius

Rather than focusing on industry switching or mainline operations, this layout models a passenger terminal at the end of a branch line or division. Terminal operations involve receiving incoming trains from various off-layout locations, breaking them down in the coach yard, and making up new trains for other destinations. Though this layout is based on Russia's Soviet October Ry., it could easily represent an American or European prototype.

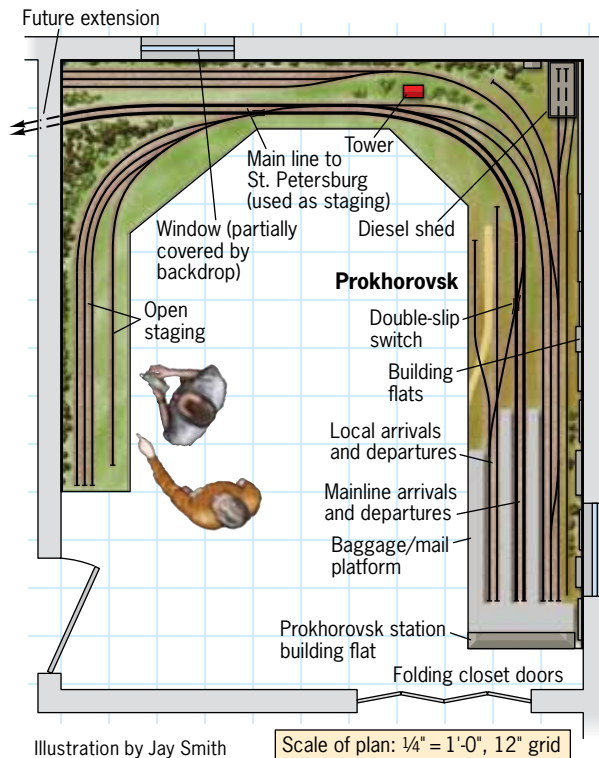


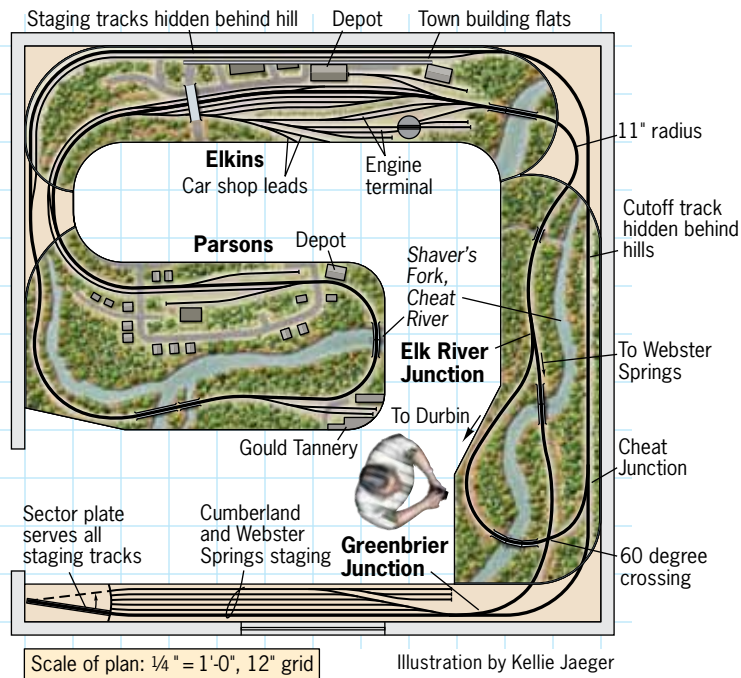
Illustration by Jay Smith

Western Maryland's Thomas Sub.

6

Published: July 2008
Scale: N (1:160)
Plan size: 12 x 12 feet
Minimum radius: 11"
Minimum turnout: Peco medium radius

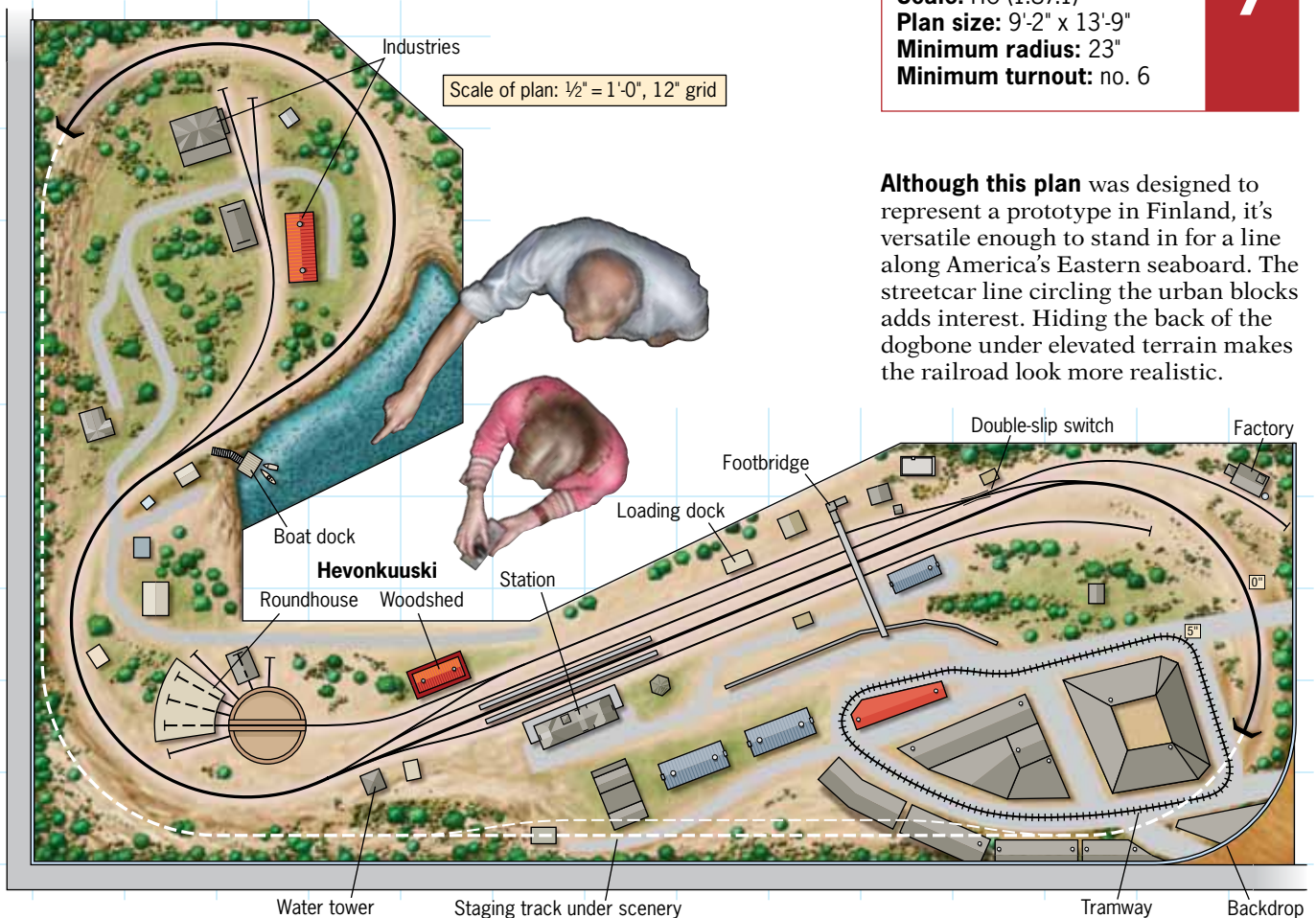
Sometimes, the prototype scene that inspires a layout isn't a yard, an industry, or a city, but simply an interesting track formation. This plan's inspiration is the Western Maryland's river-spanning triple junction in the Shaver's Fork Branch valley of West Virginia. Backdrops isolate scenes, lengthening the run.



Hevonkuusi Ry.

7

Published: November 2007
Scale: HO (1:87.1)
Plan size: 9'-2" x 13'-9"
Minimum radius: 23"
Minimum turnout: no. 6



Although this plan was designed to represent a prototype in Finland, it's versatile enough to stand in for a line along America's Eastern seaboard. The streetcar line circling the urban blocks adds interest. Hiding the back of the dogbone under elevated terrain makes the railroad look more realistic.

Illustration by Theo Cobb

Central New Mexico Ry.

8

Published: July-December 2006

Scale: On3 and On2½ (1:48)

Plan size: 11'-3" x 17'-2"

Minimum radius: 28"

Minimum turnout: no. 6

Maximum grade: 8 percent

What is it about the Southwestern United States that fascinates so many model railroaders? Maybe it's the stark, rocky terrain, the interesting narrow gauge rolling stock, or the importance of the role the railroads played in the development of the West. This plan hits all the high points. Though not much On3 equipment is commercially available, manufacturers sell kits for converting On2½ rolling stock to On3.

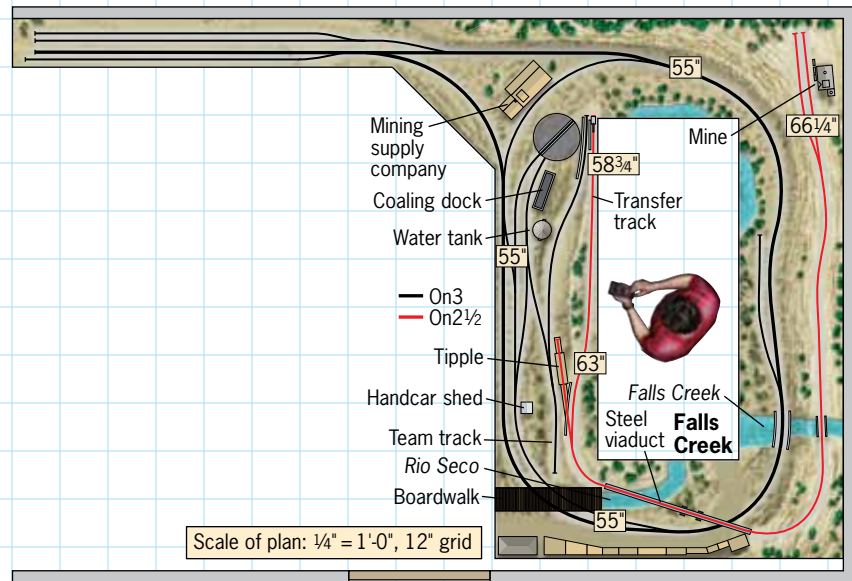


Illustration by Theo Cobb

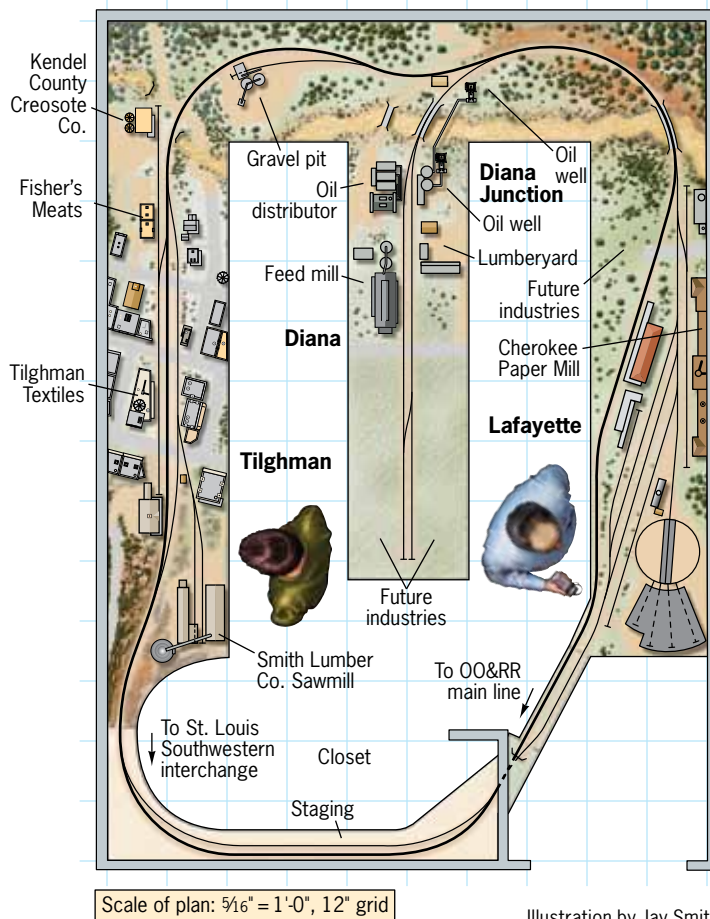


Illustration by Jay Smith

Ozark, Ouachita & Red River

9

Published: April 2004

Scale: HO (1:87.1)

Plan size: 10 x 14 feet

Minimum radius: 24"

Minimum turnout: no. 4

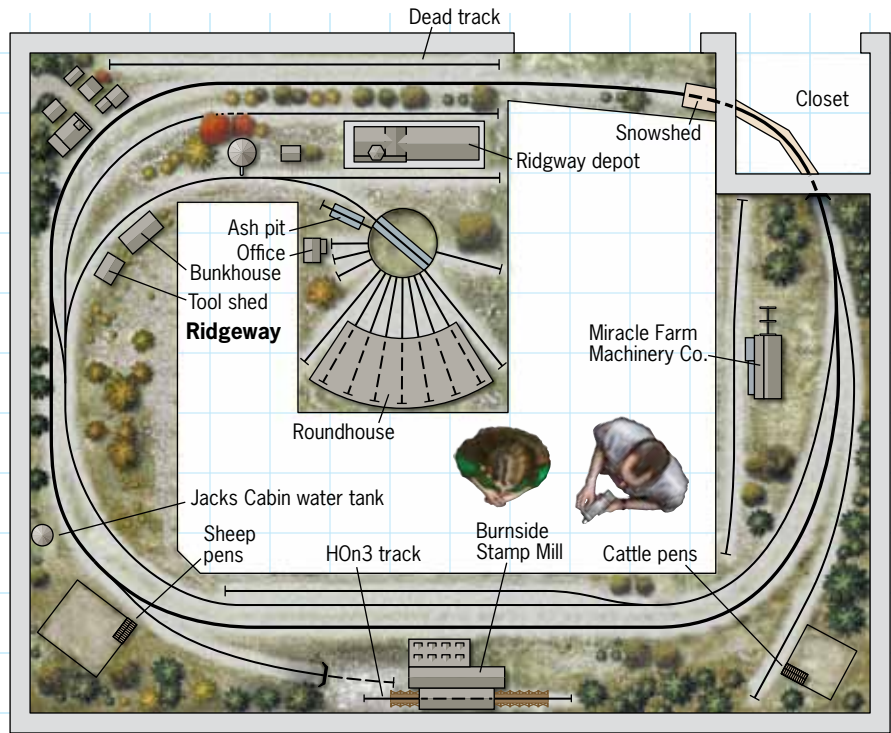
The designer of this layout drew inspiration from a track plan published in *Model Railroader* in February 1980. Starting with executive editor Andy Sperandio's San Jacinto District plan, the designer broadened the curves, extended the staging into the closet and added a lift-out bridge for continuous operation. He also moved the locale from California to Arkansas. However, this plan could be set anywhere from Alaska to Virginia.

Denver, Rio Grande & Southern

10

Published: *Great Model Railroads 2001*
Scale: Sn3 (1:64)
Plan size: 11 x 14 feet
Minimum radius: 30"
Minimum turnout: no. 6

S scale, popularized in the United States by American Flyer toy trains, is gaining favor with modelers looking for more detail than HO scale without the space requirements of O. Modeling narrow gauge further reduces the space needed for curves and right-of-way, making a room-sized layout like this one practical.



Scale of plan: 5/16" = 1'-0", 12" grid

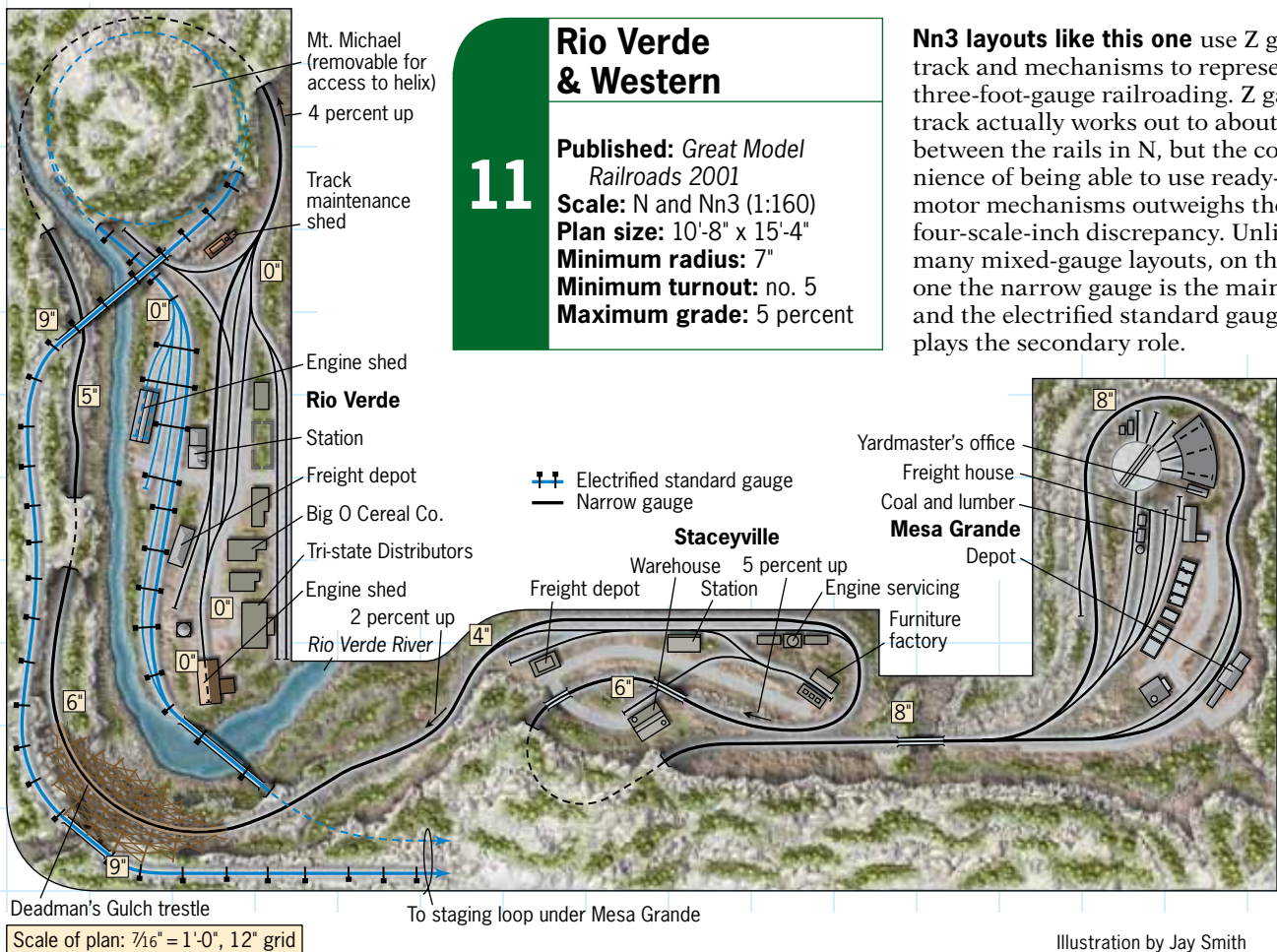
Illustration by Kellie Jaeger

Rio Verde & Western

11

Published: *Great Model Railroads 2001*
Scale: N and Nn3 (1:160)
Plan size: 10'-8" x 15'-4"
Minimum radius: 7"
Minimum turnout: no. 5
Maximum grade: 5 percent

Nn3 layouts like this one use Z gauge track and mechanisms to represent three-foot-gauge railroading. Z gauge track actually works out to about 40" between the rails in N, but the convenience of being able to use ready-made motor mechanisms outweighs the four-scale-inch discrepancy. Unlike many mixed-gauge layouts, on this one the narrow gauge is the main line and the electrified standard gauge line plays the secondary role.



Scale of plan: 7/16" = 1'-0", 12" grid

Illustration by Jay Smith

12

Arkansas & Missouri

Published: February 1999
Scale: N (1:160)
Plan size: 9 x 16 feet
Minimum radius: 10"
Minimum turnout: no. 8
Maximum grade: 6 percent

This railroad climbs a steep grade as it ascends through the Ozarks. High ridges and trees act as view blocks for most of the steepest grades. There are enough operating possibilities to keep two or more engineers busy at once.

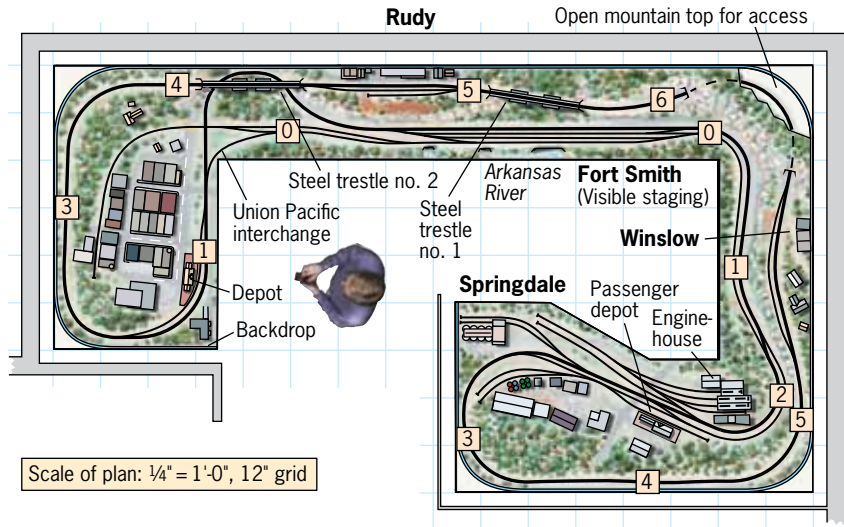
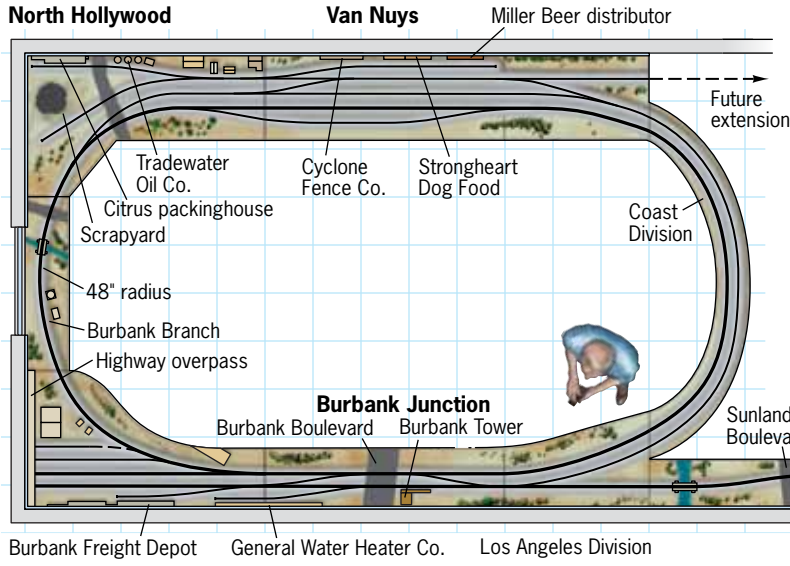


Illustration by Robert Wegner



Los Angeles & San Fernando Valley RR

Published: *Great Model Railroads 2006*
Scale: HO (1:87.1)
Plan size: 9'-6" x 23'-0"
Minimum radius: 48"
Minimum turnout: no. 6

13

Illustration by Theo Cobb

This layout began as a 5-foot-long, 1-foot-wide shelf with a single stretch of track. That shelf was followed by another, this time with turnouts, then

another and another. Building a layout in sections has advantages: sections can be built on the workbench, maintenance and cleaning are

simplified, and pieces can be photographed outside in natural daylight. It also simplifies transporting the layout, should moving become necessary.

14

The Schuylkill Iron Works

Published: May 2008
Scale: HO (1:87.1)
Plan size: 4 x 21 feet
Minimum radius: 15"
Minimum turnout: no. 4

If your industry is big enough, like an iron works, you might need a whole layout to depict it accurately. There's a

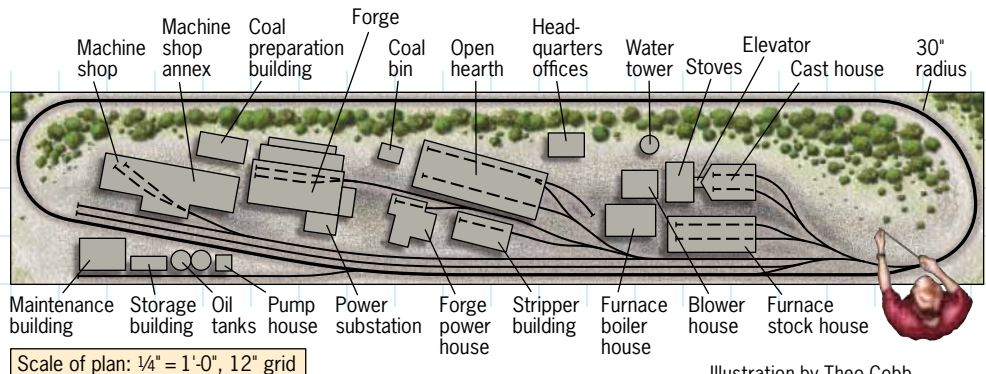


Illustration by Theo Cobb

Pennsylvania RR main line on this track plan, but the focus of this 1920s-era layout is on the movement of cars

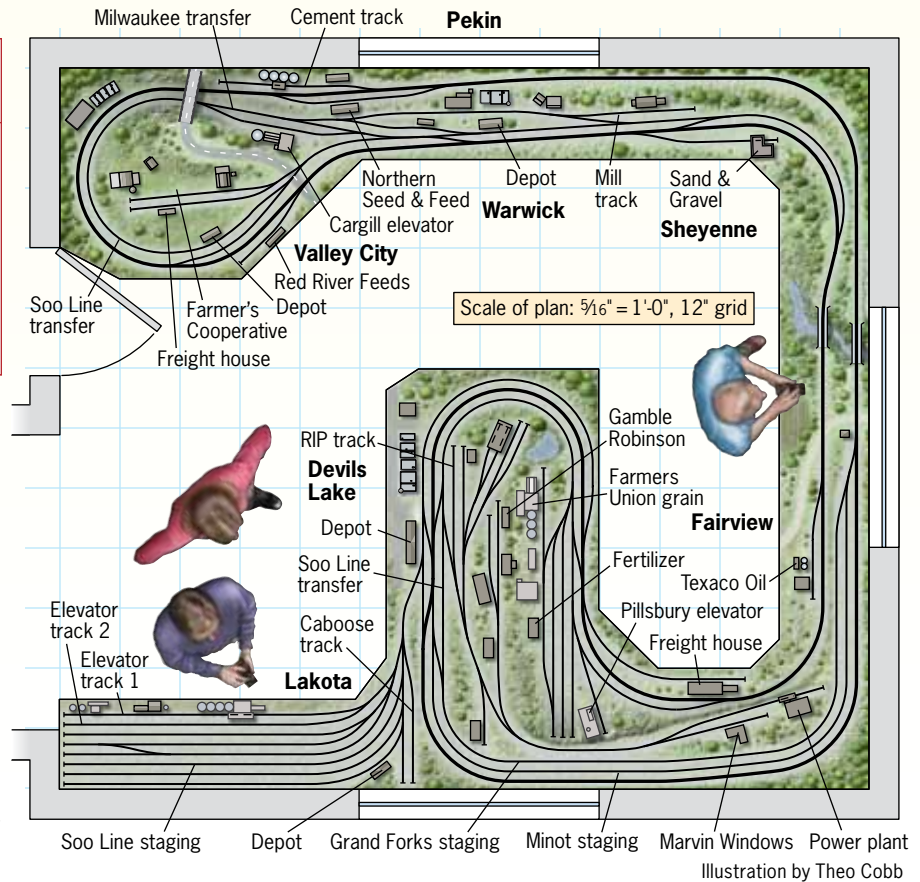
laden with ore, coal, coke, hot metal, slag, ingots, and finished product from building to building.

Dakota Northern RR

15

Published: April 2000
Scale: N (1:160)
Plan size: 12'-0" x 13'-6"
Minimum radius: 15"
Minimum turnout: no. 4
Maximum grade: 1.5 percent

Since I'm originally from the part of the country this layout is based on, it should be no surprise I selected the Dakota Northern as my Editor's Choice pick. This layout features grain elevators, fertilizer plants, and feed mills, all common industries in eastern North Dakota. There are also passenger depots, interchange tracks, and a large classification yard to add operating interest. Though this model railroad is based on the Burlington Northern, it could be adapted to represent numerous granger railroads. – *Cody Grivno, associate editor*



Wabash RR, Decatur Division, 10th District

16

Published: December 2000
Scale: HO (1:87.1)
Plan size: 12 x 13 feet
Minimum radius: 24"
Minimum turnout: no. 6
Maximum grade: 2 percent

This layout captures the last hurrah of the Wabash, just before its identity was swallowed in a merger with the Norfolk & Western in October 1967. It's designed for out-and-back operation, with trains originating in the yard at Bluffs, Ill., making their way across the Mississippi River into Missouri, turning on the hidden loop there, and returning.

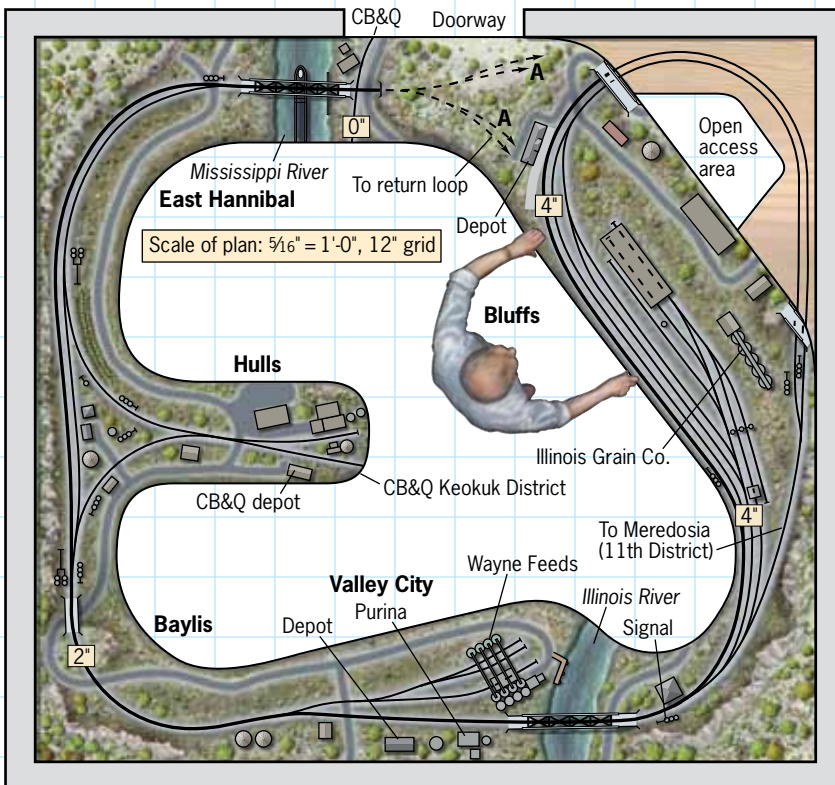


Illustration by Kellie Jaeger

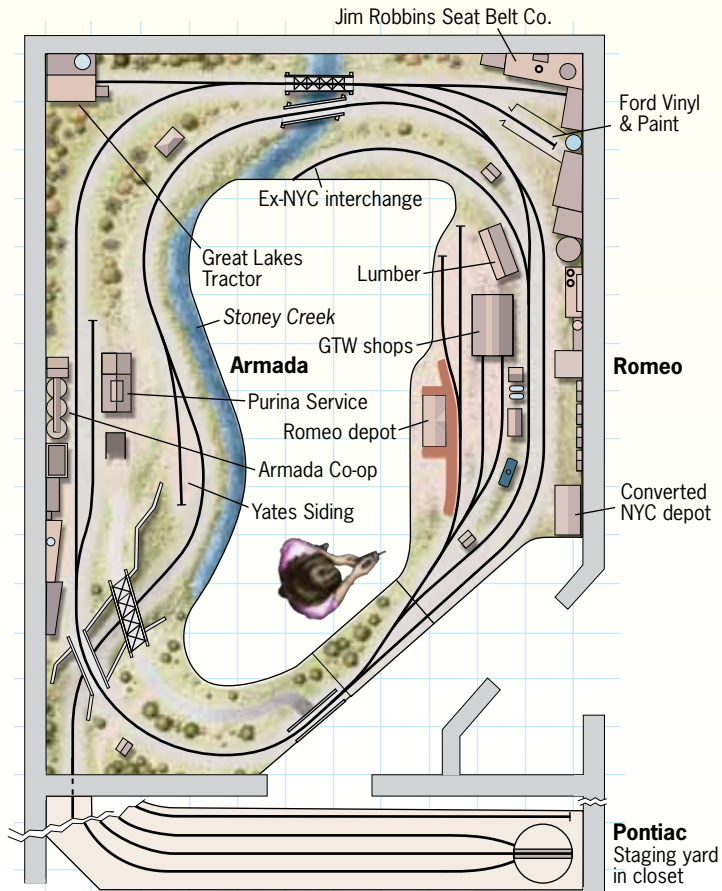
Grand Trunk Western, Romeo Subdivision

17

Published: October 2003
Scale: O (1:48)
Plan size: 11 x 15 feet
Minimum radius: 36" (main), 24" (staging)
Minimum turnout: no. 5
Maximum grade: 2 percent

Growing up in the 1980s, I watched Grand Trunk Geeps haul locals behind my grandparents' farm in Armada, Mich. Modeling a line that features four-axle diesels, short trains, and slow train speeds is a great way to get the most operation out of a limited amount of space.

Richard Cooke's clever track plan fits several industries, an interchange track, a branch line, and a staging yard with a turntable into a modest space. — *Dana Kawala, senior editor*



Scale of plan: 1/4" = 1'-0", 12" grid

Illustration by Robert Wegner

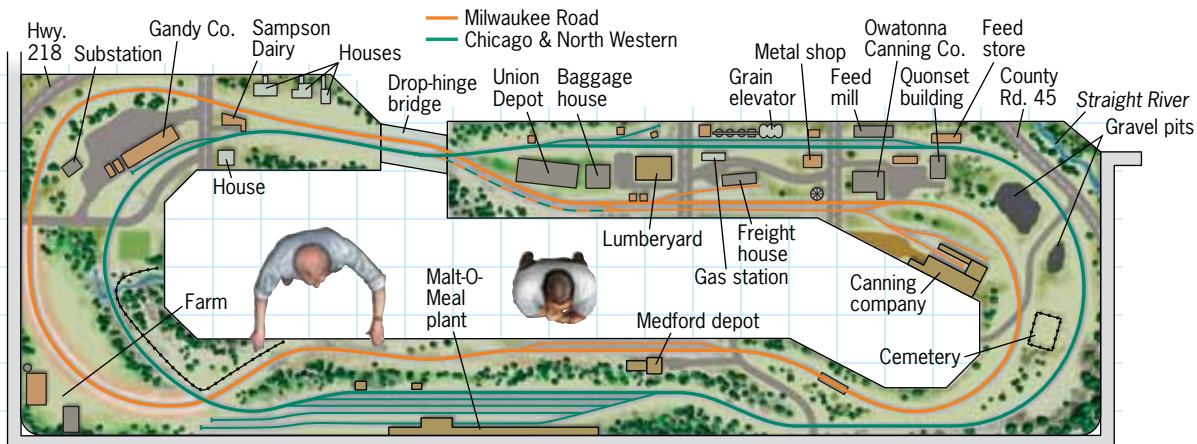
South Central Minnesota RR

18

Published: November 2005
Scale: HO (1:87.1)
Plan size: 7'-6" x 22'-6"
Minimum radius: 26"
Minimum turnout: no. 4

Who says you have to settle on only one prototype? Many cities, even small ones like Owatonna, Minn., were served by two or more railroads. This HO scale layout depicts the Chicago & North Western and Milwaukee Road lines through that farm town. Plan-

ning the sidings on the two railroads so that the industries and yards they serve overlap as little as possible keeps engineers from getting in each other's way during an operating session. And the continuous ovals allow one road to run unattended during solo operation.



Scale of plan: 1/4" = 1'-0", 12" grid

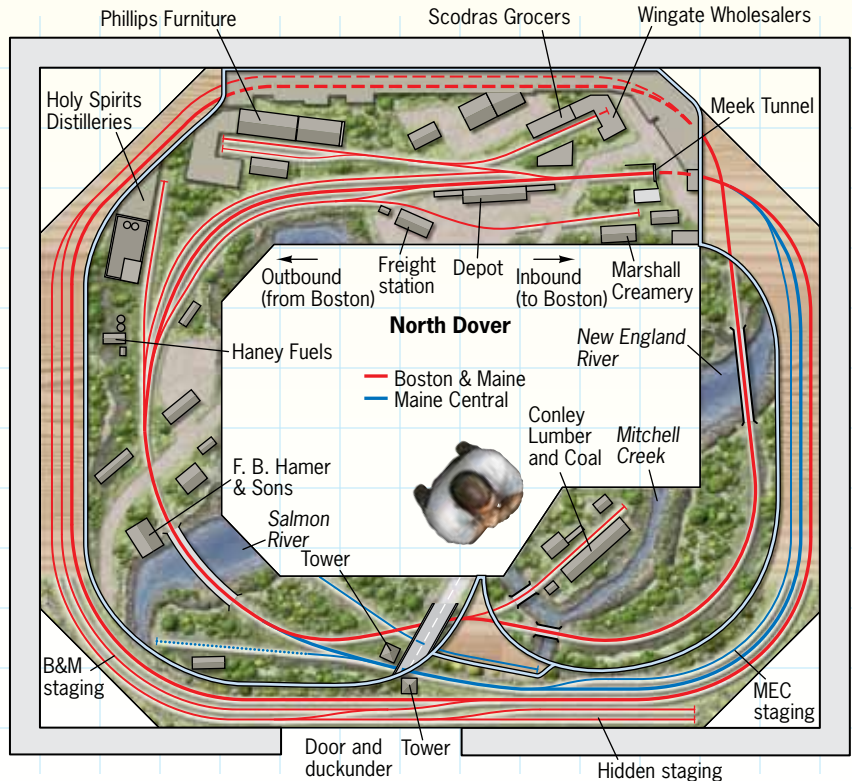
Illustration by Theo Cobb

19

**Boston & Maine:
 Western Route,
 North Dover, N.H.**

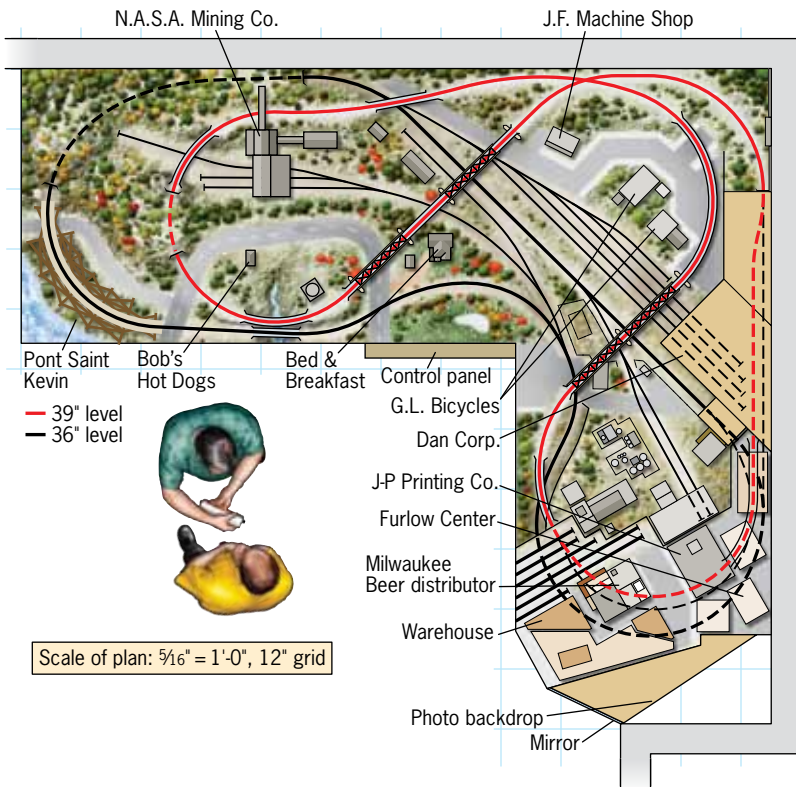
Published: *Great Model Railroads 2004*
Scale: HO (1:87.1)
Plan size: 11 x 13 feet
Minimum radius: 31"
Minimum turnout: no. 6

As long as you don't mind the duck-under to enter the room, this model railroad provides some great operation. Mike Hamer designed it for a room in his home, and the layout features two distinct scenes separated by view blocks. Mike didn't model a prototype town, but instead combined parts of some of his favorite New England railroad places to make North Dover. To gain staging space, Mike wrapped tracks around the perimeter of the layout, hiding them from view with hills and structures. The abundance of staging provides plenty of work for his operators.
 – David Popp, managing editor



Scale of plan: 5/16" = 1'-0", 12" grid

Illustration by Theo Cobb



Scale of plan: 5/16" = 1'-0", 12" grid

Illustration by Rick Johnson

**Montreal
 & Northern Ry.**

Published: January 2007
Scale: HO (1:87.1)
Plan size: 10'-4" x 12'-6"
Minimum radius: 18"
Minimum turnout: no. 4
Maximum grade: 11 percent

20

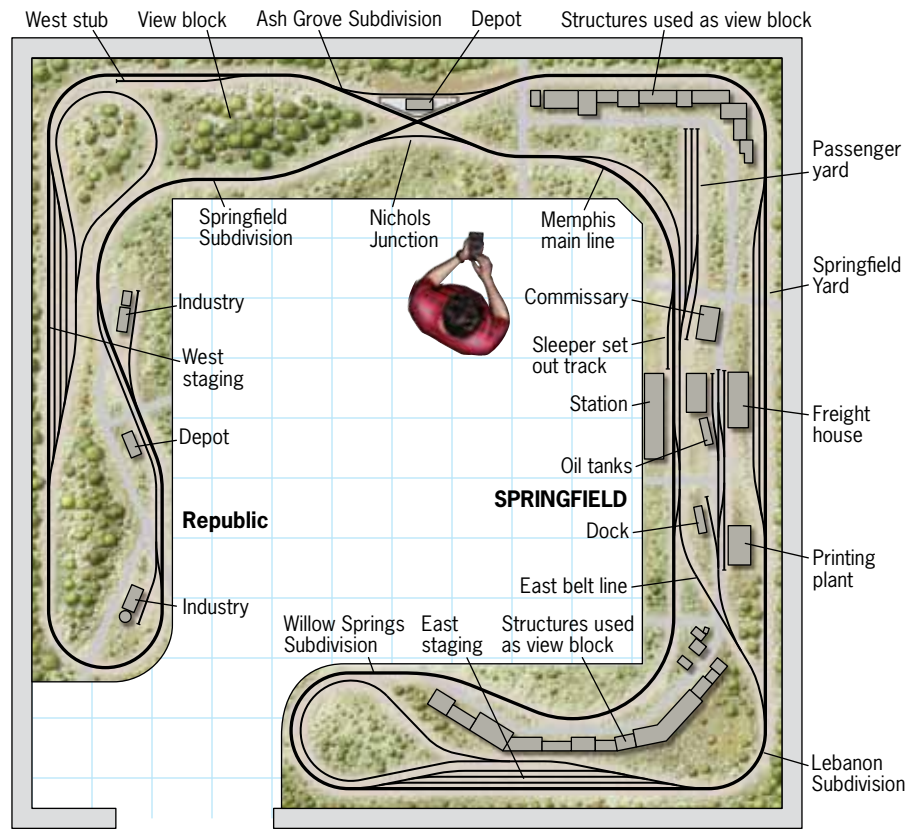
The two loops of this urban plan connect only with track concealed behind buildings. This allows a single operator to let one train run unattended on the upper level while switching the local on the lower. Tall, densely packed structures combine with partial buildings, background flats, and a photo backdrop to give one end of the compact layout the look of a truly massive city.

Springfield, Mo., on the Frisco

21

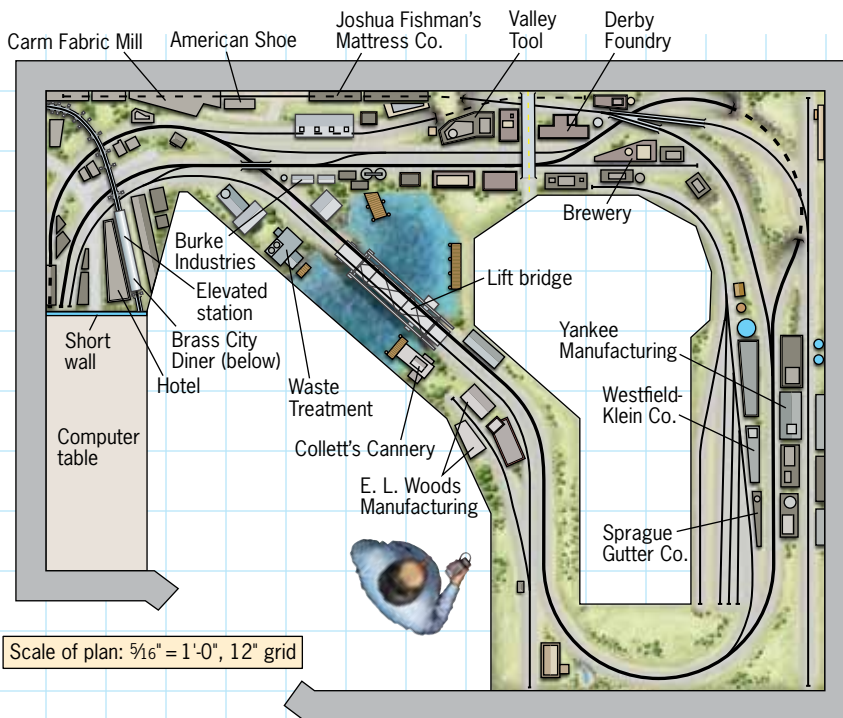
Published: December 2003
Scale: N (1:160)
Plan size: 12'-6" x 12'-6"
Minimum radius: 10"
Minimum turnout: no. 5

X marks the spot at Nichols Junction, where four subdivisions of the St. Louis-San Francisco Ry. intersected. This track plan models Frisco operations in and around Springfield, Mo., in the 1950s, when sleek passenger trains shared the rails with through and local freights. Business blocks and wooded hills hide the fact that the four legs of the X form a figure eight, as well as disguising the staging yards at both ends of the shelf.



Scale of plan: $\frac{5}{16}$ " = 1'-0", 12" grid

Illustration by Rick Johnson



Scale of plan: $\frac{5}{16}$ " = 1'-0", 12" grid

Illustration by Kellie Jaeger

Waterbury Branch of the New Haven

22

Published: January 1999
Scale: HO (1:87.1)
Plan size: 10 x 13 feet
Minimum radius: 23"
Minimum turnout: no. 5
Maximum grade: 3 percent

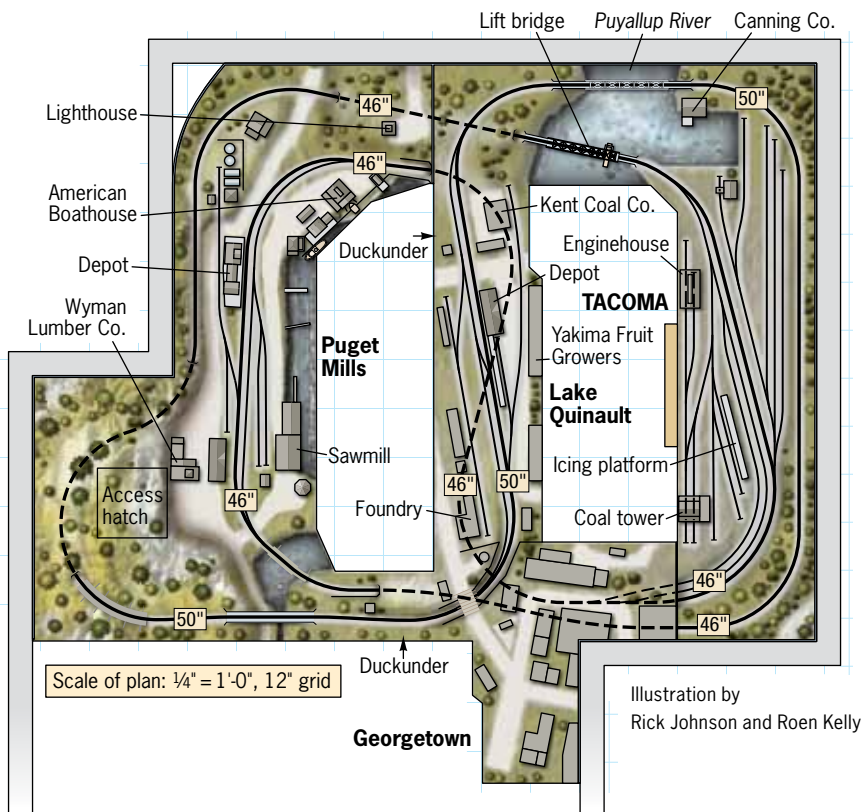
This railroad's designer sought to make his small layout look like a big city. Layers of tall structures, kit-bashed to fit between adjacent tracks, create the look of a much larger urban area. He also doesn't let track overwhelm the layout, keeping the main to a single track and hiding some tracks under hills and behind buildings.

Olympic & Puget Sound Ry.

23

Published: March 2007
Scale: HO (1:87.1)
Plan size: 15'-0" x 16'-4"
Minimum radius: 24"
Minimum turnout: no. 4
Maximum grade: 2.5 percent

There's a lot of main line in this track plan, but it doesn't look crowded. Linking distant parts of the layout with track hidden in tunnels maximizes the mainline run while leaving lots of room for realistic scenery, from urban blocks to rugged mountains. Keeping hard-to-reach track, including most hidden tracks and those on the far side of a shelf from the operator, to single track without turnouts reduces access problems and reduces the chance of derailments.



MODEL RAILROADER ★★ ★ EDITOR'S CHOICE

New Haven's Cape Cod Branch

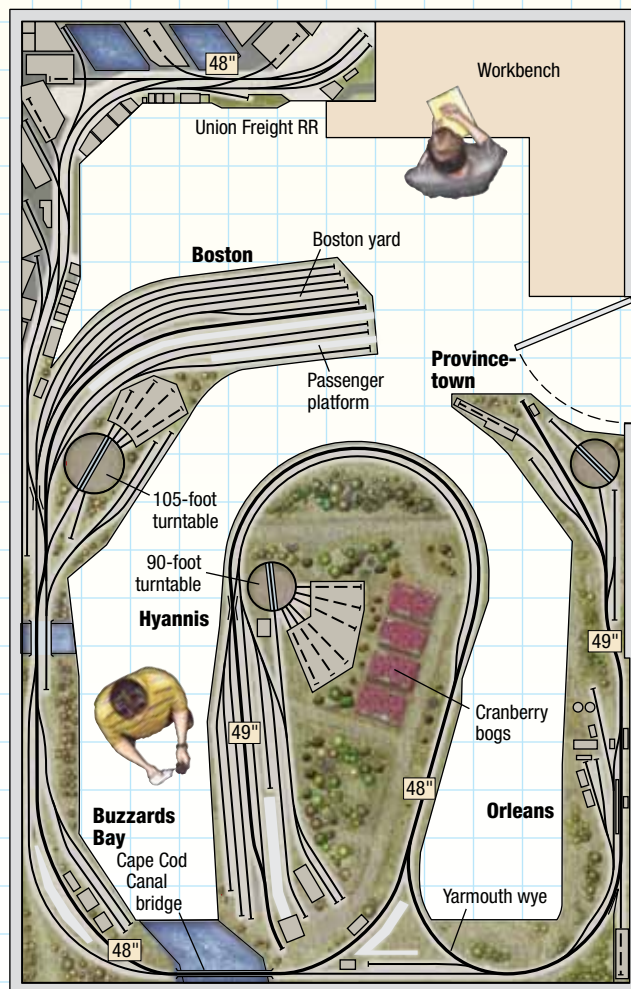
24

Published: October 2006
Scale: HO (1:87.1)
Plan size: 12'-6" x 20'-0"
Minimum radius: 26"
Minimum turnout: no. 4
Maximum grade: 1.5 percent

Maybe it's because I grew up around water, but I've always been fascinated by seaside railroads. The interchange of cargo between ships and trains, the visual interest of bridges and trestles, and the many different ways to model water also add to the appeal.

This plan by John Pryke has all of those elements, from Boston Harbor to the lift bridge over the Cape Cod Canal. That bridge's 544-foot span was a record-setter at the time it was built, and is almost mandatory for a layout like this.

When that bridge was built in 1933, its weight limits prevented its use by heavier engines developed later. Similar restrictions can be used to add to the operating challenges of any railroad. — Steven Otte, associate editor



Black Rock & Marmot

25

Published: December 1999
Scale: N (1:160)
Plan size: 14 x 14 feet
Minimum radius: 18"
Minimum turnout: no. 8
Maximum grade: 2.5 percent

This freelanced railroad is set in the mountains of northern California. Judicious use of tunnels keeps the track from crowding out the terrain, which stretches from the forest to the high desert. The tunnels also disguise the mainline loop, making the track seem like a more realistic point-to-point operation. Stopping a train briefly in a tunnel can also increase the virtual distance between stations.

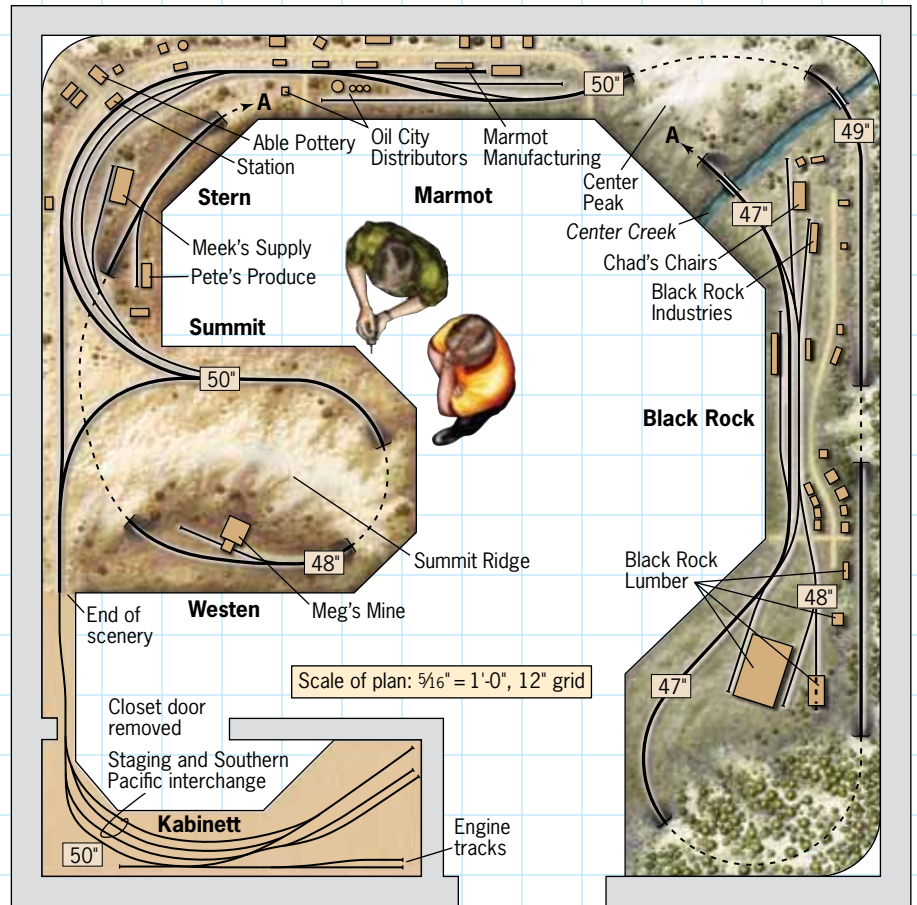


Illustration by Rick Johnson

Santa Fe, Needles District

26

Published: September 2002
Scale: N (1:160)
Plan size: 9'-8" x 20'-0"
Minimum radius: 15½"
Minimum turnout: no. 6
Maximum grade: 2 percent

This railroad is designed for the modeler who has a lot of motive power and wants to show it off. Big yards at both ends, backed up by staging in an

adjacent room, means the ability to run plenty of trains. Gentle curves on the double-tracked main line show off long trains to their best advantage.

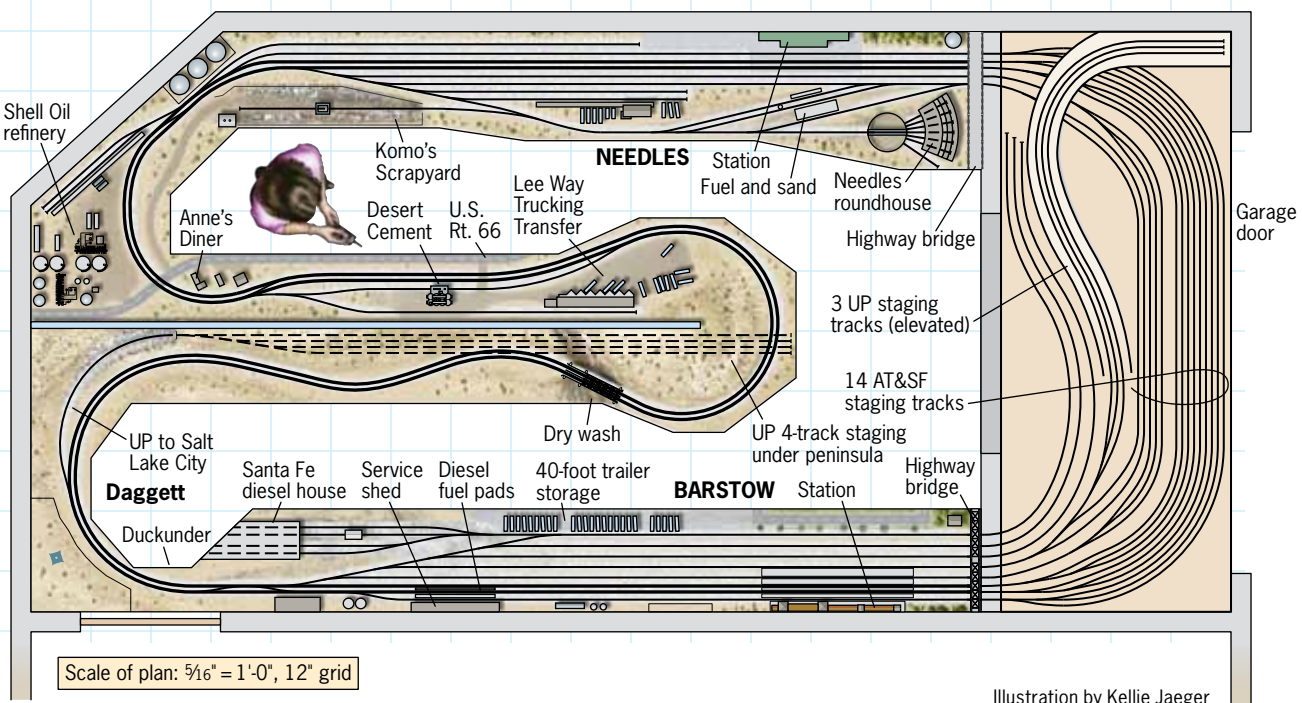


Illustration by Kellie Jaeger

Maryland & Pennsylvania, Pennsylvania Division

27

Published: December 2005
Scale: HO (1:87.1)
Plan size: 8'-8" x 22'-0"
Minimum radius: 18"
Minimum turnout: no. 4
Maximum grade: 2 percent

This track plan depicts a layout built by modeler Stan White. I had the pleasure of operating it a couple of times, so I can attest that it was faithful to its prototype, a well-known Eastern short line, and a lot of fun. The main line ran from the stub-end terminal at York, Pa., to a reverse loop with storage sidings hidden beneath York, representing the "Ma & Pa's" big-city terminal in Baltimore. Besides the off-stage loop, interchange tracks at York provided additional

beyond-the-layout connections to other railroads. Despite its short mainline run, the layout supported realistic operation. Stan's layout design satisfies many of my own criteria for a successful model railroad, including walk-in access, representation of an interesting prototype, and a realistic operating scheme. The layout's sharp curves, 18" radius in HO scale, were no hindrance to the Ma & Pa's small locomotives and short passenger cars. — *Andy Sperandeo, executive editor*

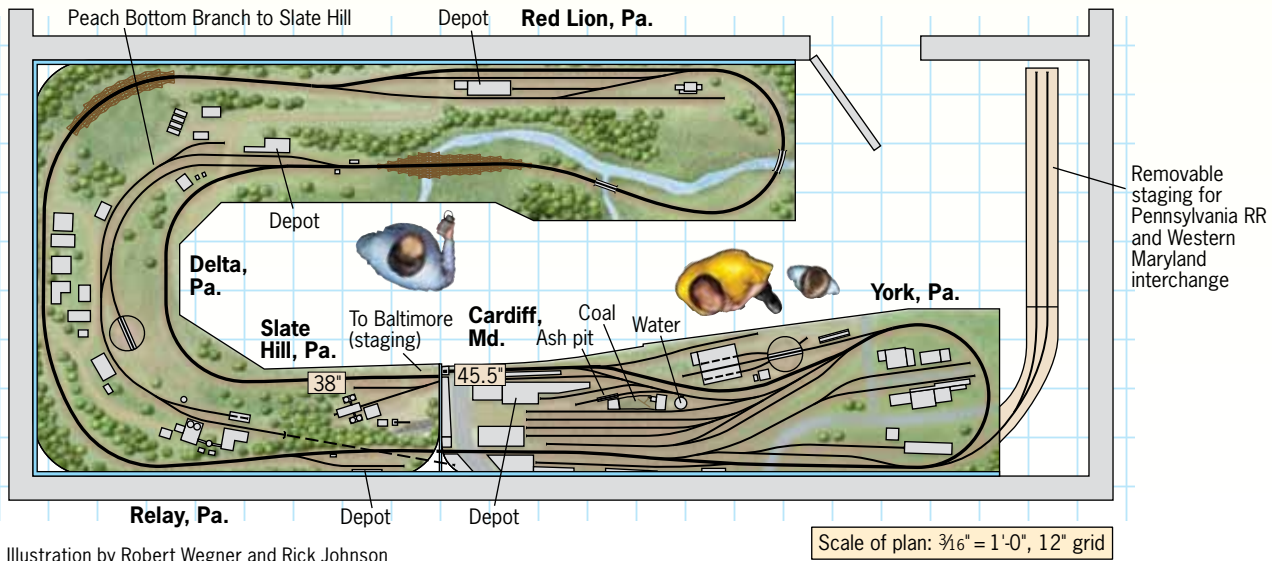


Illustration by Robert Wegner and Rick Johnson

Oak Grove, Ill. on the Missouri, Kansas & Quincy

28

Published: June 2005
Scale: HO (1:87.1)
Plan size: 6'-9" x 16'-0", plus off-layout staging
Minimum radius: 30"
Minimum turnout: no. 6

The interchange between two Class 1 railroads at a Midwestern town is the focus of this plan. Grain elevators and other agricultural-themed businesses help place this railroad in Illinois. This plan could be part of a larger layout, although it provides plenty of operating interest on its own.

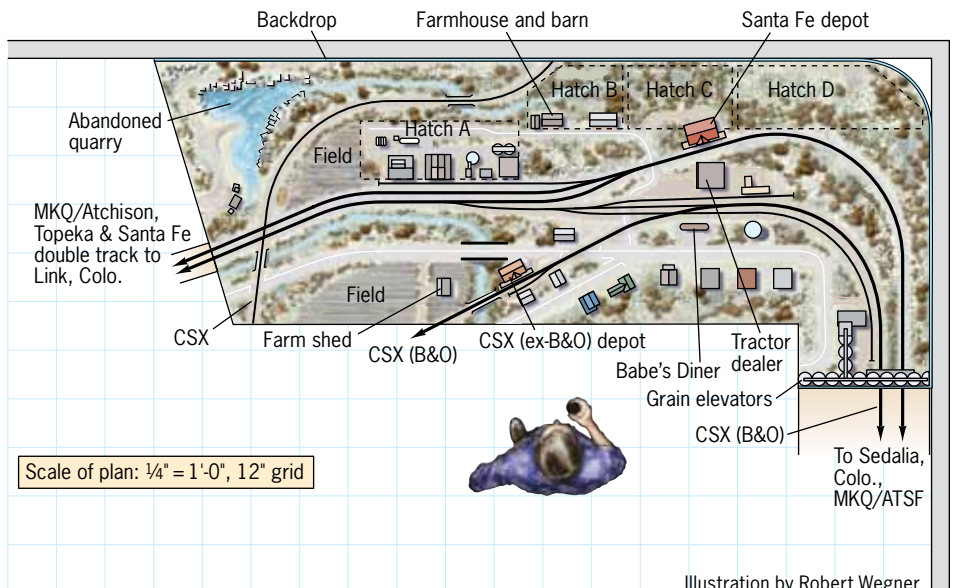


Illustration by Robert Wegner