

Step by step: simple  
realistic trees

Better handrails for your  
N scale diesels

H0 Cab-  
Forward



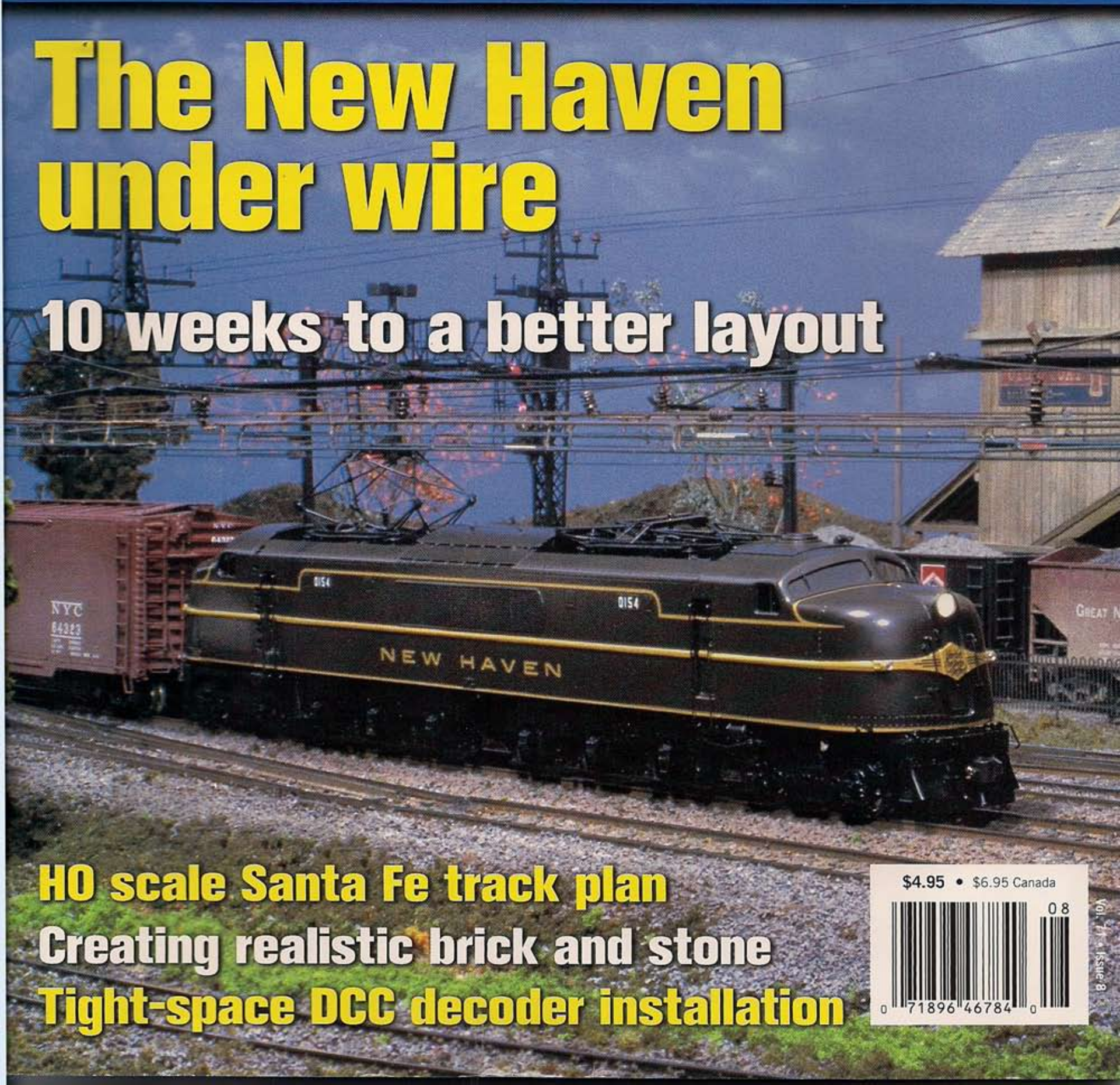
# Model Railroader®

August 2004 • modelrailroader.com

Dream it. Plan it. Build it.

## The New Haven under wire

### 10 weeks to a better layout



**H0 scale Santa Fe track plan**

**Creating realistic brick and stone**

**Tight-space DCC decoder installation**

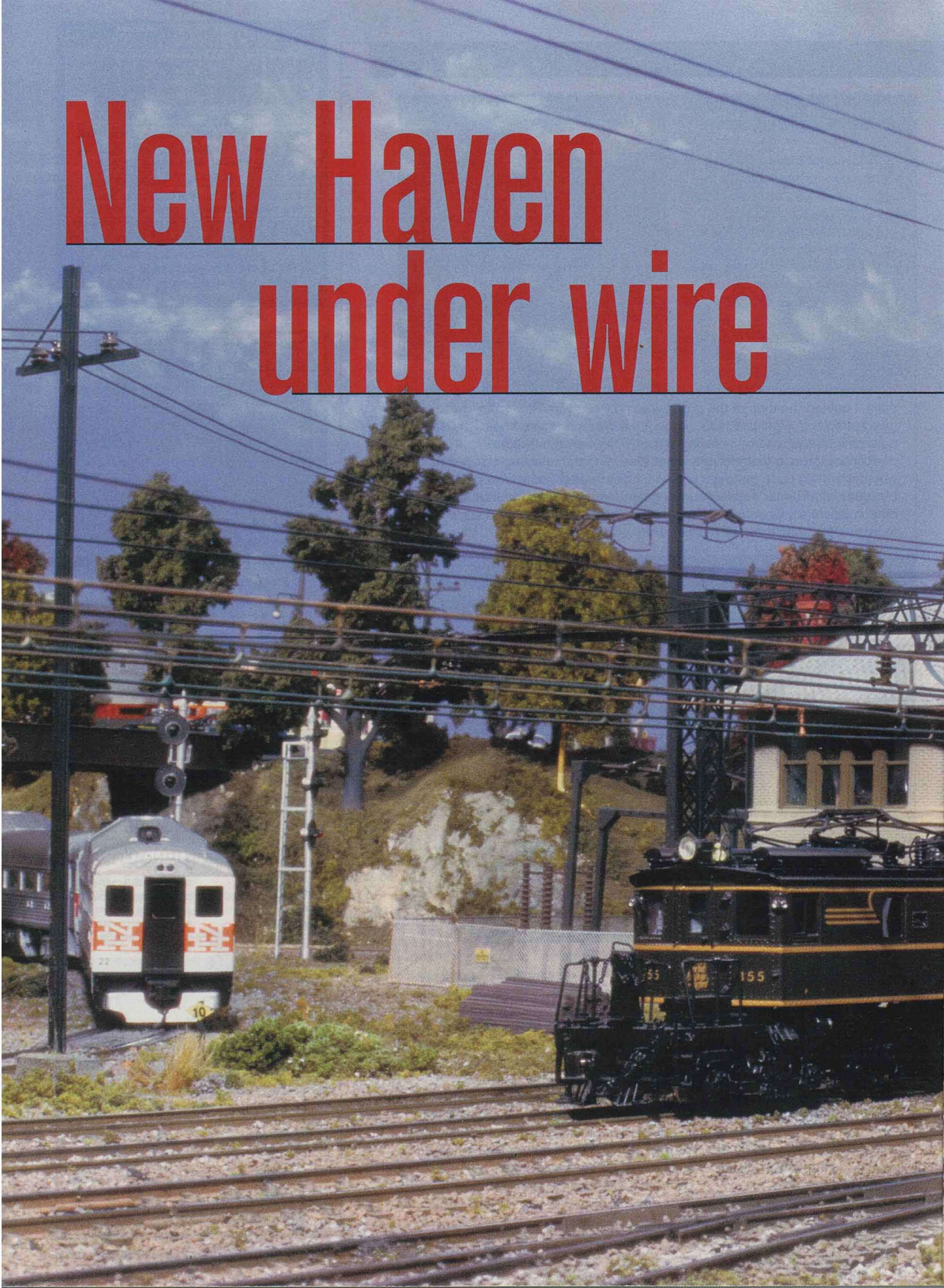
\$4.95 • \$6.95 Canada



08

Vol. 11 • Issue 8

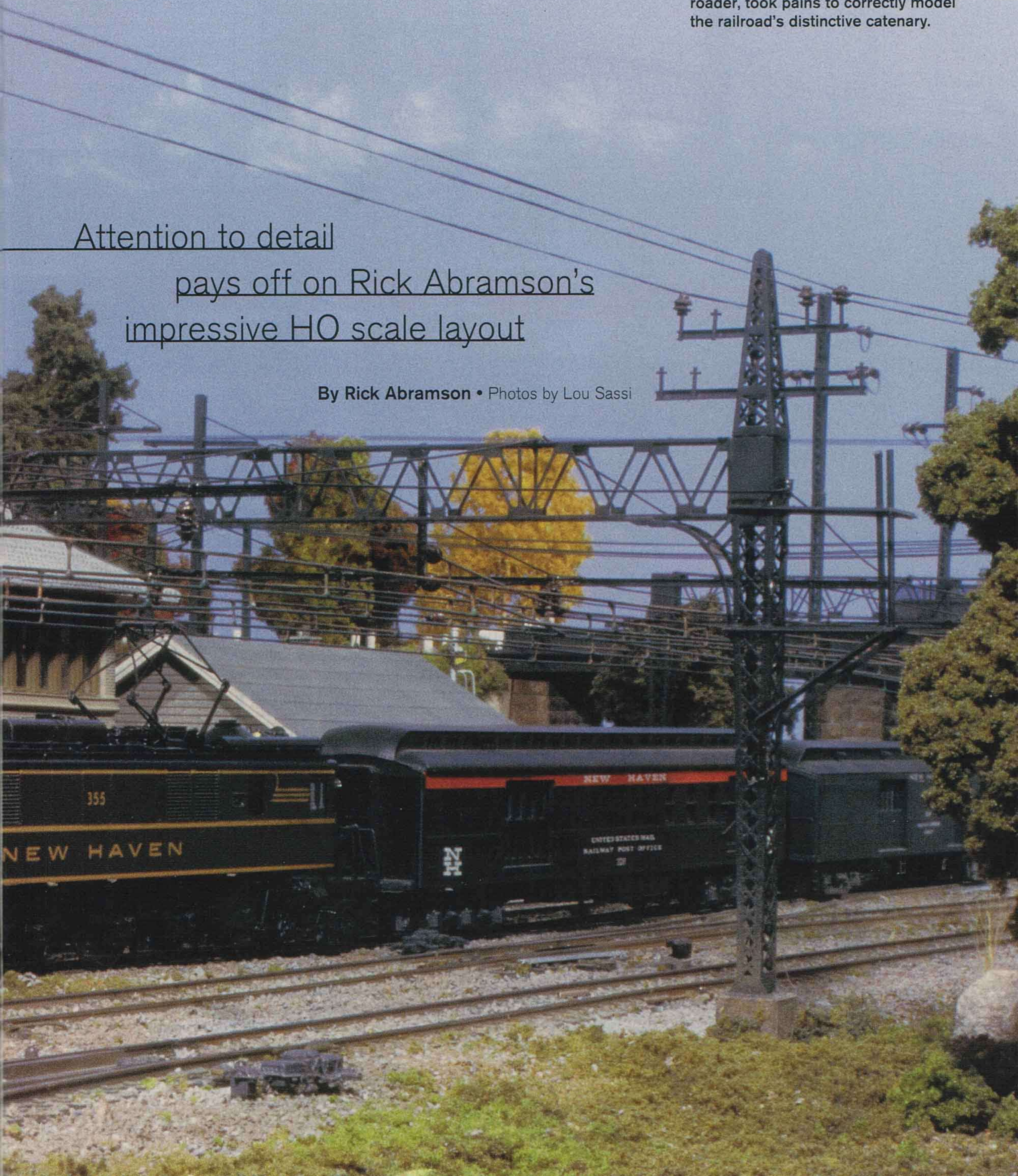
# New Haven under wire

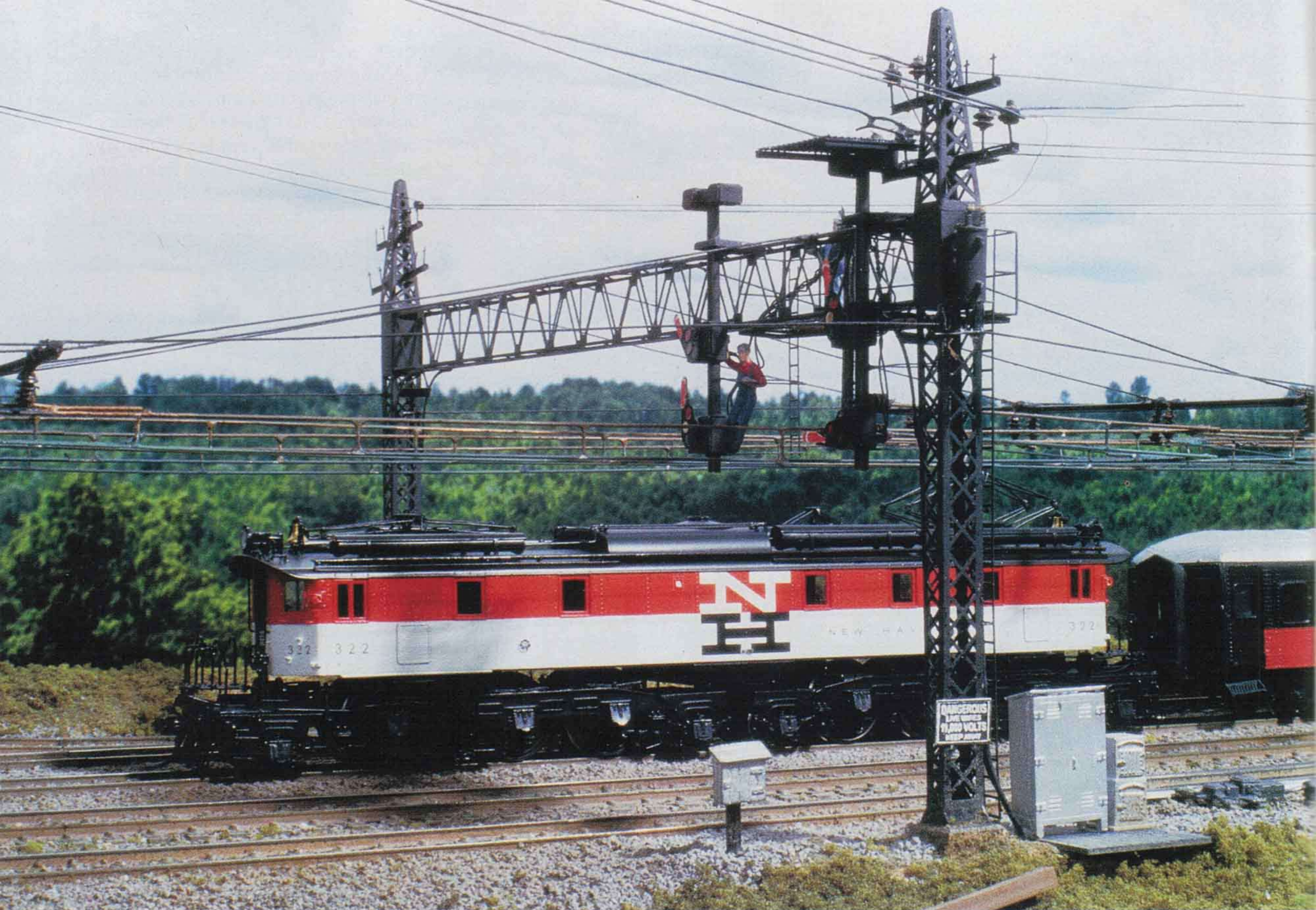


**1.** A westbound EP-3 motor rolls past the wye at Devon, Conn., on Rick Abramson's HO New Haven layout. Coming down the west leg of the wye is the Budd RDC-equipped train from Waterbury. Rick, a former NH rail-roader, took pains to correctly model the railroad's distinctive catenary.

Attention to detail  
pays off on Rick Abramson's  
impressive HO scale layout

By Rick Abramson • Photos by Lou Sassi





**G**rowing up along the West End of the New York, New Haven & Hartford RR gave me a front-row seat for one of the greatest shows on rails. Running between New York City and New Haven, Conn., the NH's West End was the intensely busy quadruple-track heart of a great railroad. I got to know the West End even better when I embarked on a career with the New Haven. My memories of the West End came flooding back when I started planning my 12'-6" x 19'-6" HO scale layout.

I modeled the West End so I could run heavy electric locomotives (generally known as "motors") on frequent passenger trains and only slightly less-frequent freights.

My decision meant that I had to face the challenge of modeling the New Haven's distinctive catenary (the network of overhead electric and supporting cables). Correctly modeling this signature aspect of the West End was more difficult than I expected and more rewarding than I could have dreamed.

### New Haven in a nutshell

My layout represents the New Haven's main line between Bridgeport

and Devon, Conn. While not a great distance, this stretch of railroad incorporated all the elements of the NH's main line – a major station (Bridgeport), the junction of two heavy-duty sections of railroad (Devon), and a representation of typical New England industry.

Devon, 12 miles west of New Haven, is the location of a wye junction. Trains to Maybrook run under catenary to Tower SS-71 at Devon, then proceed up the east leg of the wye to Derby Junction. The west leg of the wye linked trains from Bridgeport to Waterbury, Conn.

In June 1997, I completed work on my railroad room, then faced the challenge of designing a track plan. I had to employ selective compression to get all those features I wanted into the available space. The prototype electrified zone is a four-track main line. I was able to use four tracks through Devon, but I had room for only two tracks along the remainder of the layout. I located Tower SS-71 at Devon at the front of the layout with both legs of the wye coming off track 3 – as on the prototype.

With the track plan complete, I had my friend John Grosner design and build the benchwork. We decided to set

**2. Electric motor no. 322, one of two EP-2s painted in the railroad's distinctive "McGinnis" color scheme, is west-bound with a New Haven to New York City express. The brass locomotive is made by Railworks.**

### Layout at a glance

**Name:** New York, New Haven & Hartford RR

**Scale:** HO (1:87.1)

**Size:** 12'-6" x 19'-6"

**Prototype:** NH electrified zone

**Period:** 1950s to 1960s

**Locale:** southwestern Connecticut

**Layout style:** around-the-walls and peninsula

**Layout height:** 49"

**Benchwork:** Open grid

**Roadbed:** Homasote

**Length of mainline run:** 65 feet

**Track:** code 100 flextrack

**Turnout minimum:** no. 6

**Minimum radius:** 36" (main line)

**Maximum grade:** 2 percent

**Scenery:** Styrofoam and plaster gauze

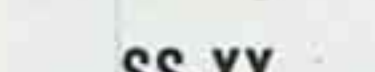
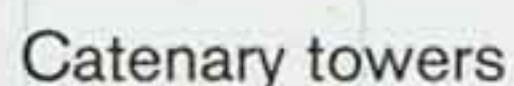
**Backdrop:** printed scene

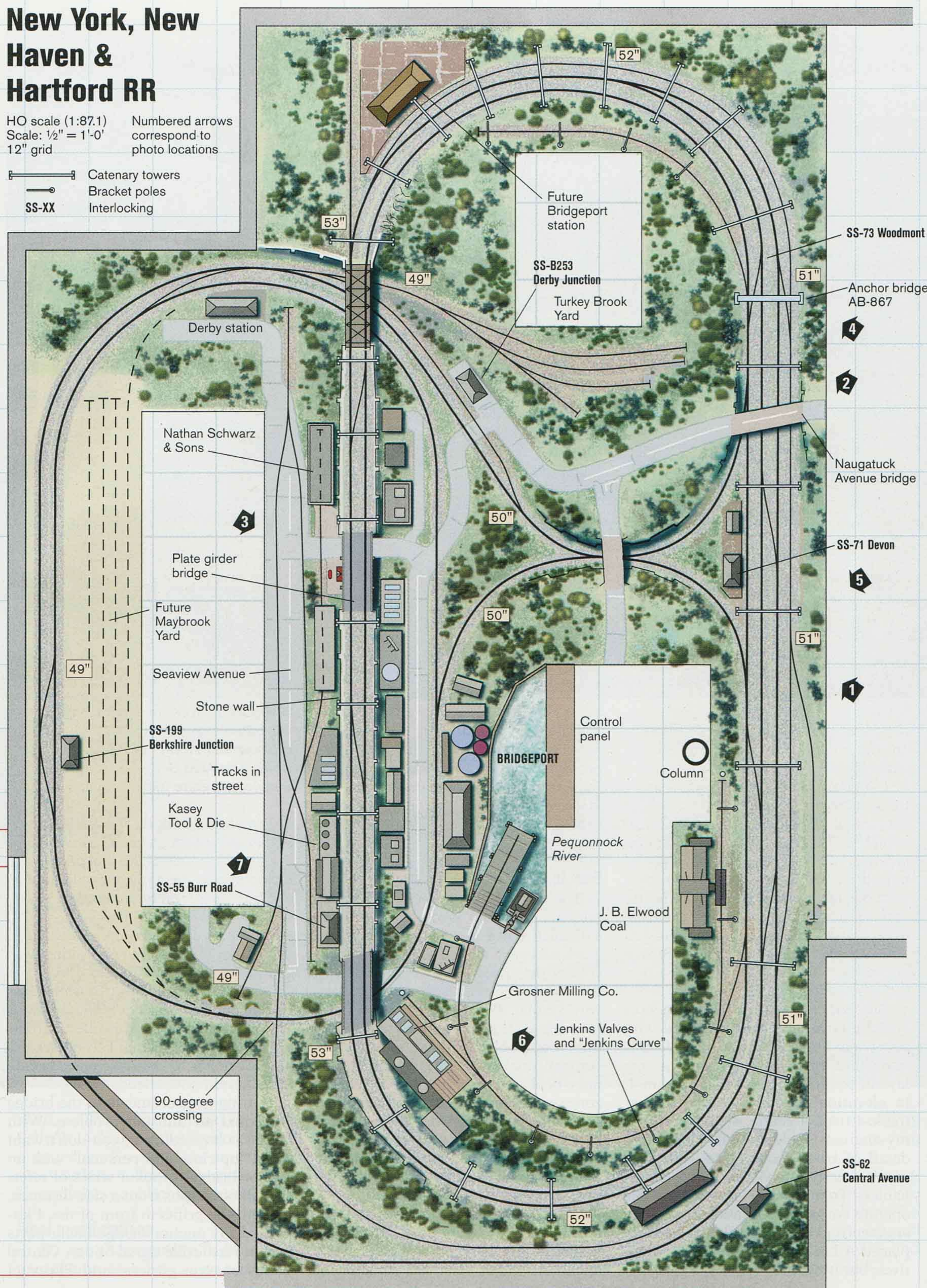
**Control:** cab control

# New York, New Haven & Hartford RR

HO scale (1:87.1)  
Scale: 1/2" = 1'-0"  
12" grid

Numbered arrows  
correspond to  
photo locations

-  Catenary towers
-  Bracket poles
-  SS-XX
-  Interlocking





the track level at 49" above the floor – an ideal height for resting my elbows while installing the catenary.

I superelevated all the curves using Richard Stoving's stripwood technique detailed in the September 1997 issue of *Model Railroader*. The superelevation meant that the catenary had to be moved off center to allow for the pantographs leaning over as the locomotive swept around the curves. In some locations, it took me four hours to install three feet of catenary on a curve. Stringing catenary is not a project for a person who lacks patience!

The NH passes through Bridgeport on a massive embankment faced with cut stone. I made sure to include this important railroad landmark on my layout, but in doing so I had to gain 4" in elevation to cross above another track. I used a gentle, steady grade so my engines wouldn't stall – I love the detail of brass locomotives, but they aren't exactly known for being heavy-haulers. To make the elevated main line operate smoothly required some fancy engineering and several strategically placed A-Line weights in the locomotives, but it works!

I also modeled an area of street running in Bridgeport to represent the Seaview Avenue line, an electrified industrial railroad operated by the NH in the east end of the city. The wire came down in the early 1950s and Alco S-1 diesels took over.

### How to hang 11,000 volts in mid-air

The catenary is the most visible and intricate part of my layout. The NH used a distinctive design that included lattice-work catenary towers (toy-maker A.C. Gilbert patterned his Erector sets after them) and the railroad's own catenary wire system. Fortunately, my task was made easier thanks to the efforts of Don Silberbauer of Model Memories. His company makes accurate NH-style catenary bridges and left-handed electric-zone semaphores, both NH trademarks.

Before beginning work on the wire, I took numerous photographs of the prototype catenary system, including the massive anchor/sectionalizing bridge that spans the tracks at Devon.

Anchor bridges are huge structures that serve two functions. As the name indicates, this is where the catenary is anchored. Major electrical isolation of

**3. Open-platform m.u. cars, nearing the end of their service life, pass over the teeming streets of Bridgeport, Conn. The Alco S-1 is working the Seaview Avenue local freight.**

**4. The anchor bridge at Devon is a New Haven electrification landmark. Working from photographs of the real bridge, Rick modeled the array of circuit breakers, bus wires, and transformers.**

the catenary into sections is located at the anchor bridges. The NH, along with generating its own power, purchased commercial power from Consolidated Edison and Connecticut Light & Power. The dense array of oil-filled circuit breakers, bus wires, and transformers on the anchor bridges served to isolate the different power feeds.

Getting measurements of the bridge presented an unusual problem. With 11,000 volts feeding it, you don't want to get "up-close and personal" with an anchor bridge! I took a series of reference photographs from a safe distance.

With the prints in front of me, I kit-bashed my anchor bridge using parts from a Plasticville signal bridge, Central Valley styrene girders, and Plastruct



shapes. The circuit breakers are by Selly. It took about two weeks of detail-oriented work to build the model, but it was worth it. Following the prototype, I installed my anchor bridge at Devon.

### Final modifications

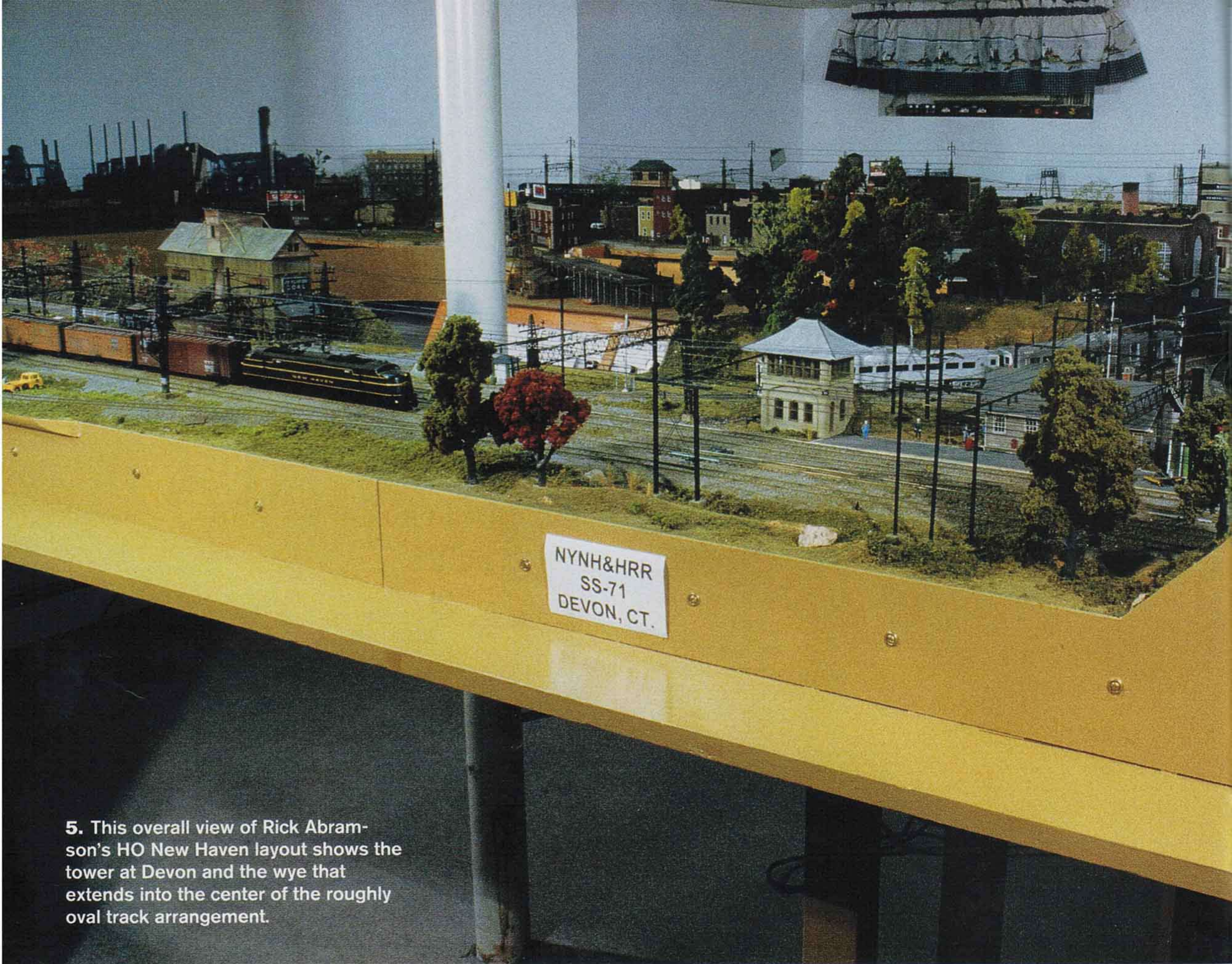
To test the catenary, I mounted a pantograph on a boxcar and pushed it

slowly with a diesel. I wanted to make sure the wire was positioned correctly before running locomotives – the pantographs cost \$30 each and I didn't want to break too many of them!

I planned to electrify the wire to supply power to the locomotives. Then I noticed that none of the pantographs is insulated from the car bodies on my

brass electrics. With eight mounting points per locomotive, times 15 models, I decided to nix this plan.

Once the layout was in regular operation, I found that the overhead wire causes wear on the pantograph shoes. To eliminate this problem, I cut exposed 35mm slide film to fit the shoes and cemented it to them. Works fine.



NYNH&HRR  
SS-71  
DEVON, CT.

5. This overall view of Rick Abramson's HO New Haven layout shows the tower at Devon and the wye that extends into the center of the roughly oval track arrangement.



It's unusual to see a model railroad where electrics run with pantographs in contact with the catenary. Getting to this point was time-consuming, but I think it was well worth the effort.

### Operating the layout

My railroad has DC cab control with four cabs. Figuring out how to wire two wyes, multiple turnouts and crossovers, and four cabs, any one of which had to be able to control trains anywhere on the layout, was tricky. Fortunately, I was able to call on my friends Ken Williams and Scott Russell – wiring wizards!

A dispatcher directs the individual train crews during operating sessions. Yards are located in Bridgeport and Derby Junction.

6. The year is 1950, and switcher 0212 is working industrial tracks in Bridgeport. Above, on the cut-stone embankment, an EP-2 is taking a Boston-bound express past Tower SS-55.



Trains entering the main from either Bridgeport Yard or Seaview Avenue must secure permission from the dispatcher. The local way freights have to be sandwiched between the mainline expresses and road freights. As on the real railroad, there are engine restrictions to consider and plenty of lineside industries to switch. Switching instructions are given to crews before an operating session.

### Engines and rolling stock

While I have models of all New Haven motors, both freight and passenger, I use only those that fit the period represented in a given operating session. For the most part, this is the mid-1950s through the end of 1968. My electric locomotive models are brass imports from Railworks and Overland.

Engines for the non-electrified zone range from General Electric 44-tonners and U25Bs to Alco RS-1s, RS-2s, and RS-3s. The "Naugy," as employees called



**7. An EP-3, one of 10 built by General Electric in 1931, leans into a curve approaching Tower SS-55. The brass locomotive is by Overland Models.**

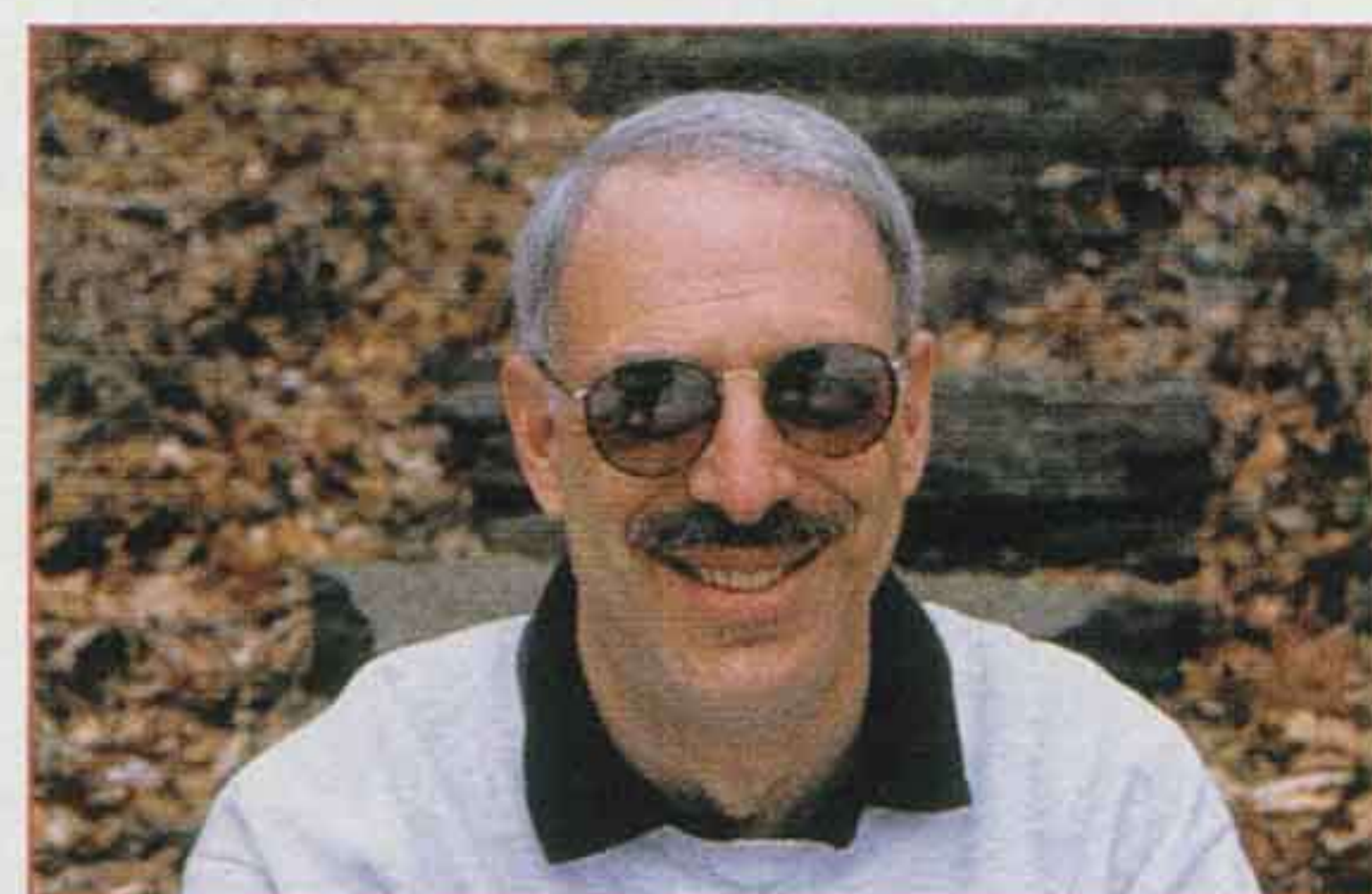
the train to Waterbury, is handled by Life-Like RDCs. The NH and the Pennsylvania RR operated joint passenger service via the Hell Gate Bridge route from Boston to Washington, D.C., so I have a roster of PRR equipment too.

### End of the New Haven

The NYNH&H was merged into the Penn Central on January 1, 1969. I hated to see my favorite railroad disappear. The real NH may be gone, but thanks to my layout I can relive the good old days and again enjoy the big motors of the New York, New Haven & Hartford. **MR**

### More on our Web site

Rick Abramson shares his favorite techniques for creating realistic catenary. Read his exclusive online article at our Web site [www.modelrailroader.com](http://www.modelrailroader.com)



### ▶▶ Meet Rick Abramson

Rick, a former New Haven railroader, has always been fascinated by the NH, specifically the NH's electric zone. Rick serves on the board of directors of the NHRR Historical & Technical Association and is head of the association's technical committee. He currently works as a dispatcher for the Housatonic RR. Rick and his wife Christine reside in Connecticut – near the former NH main.