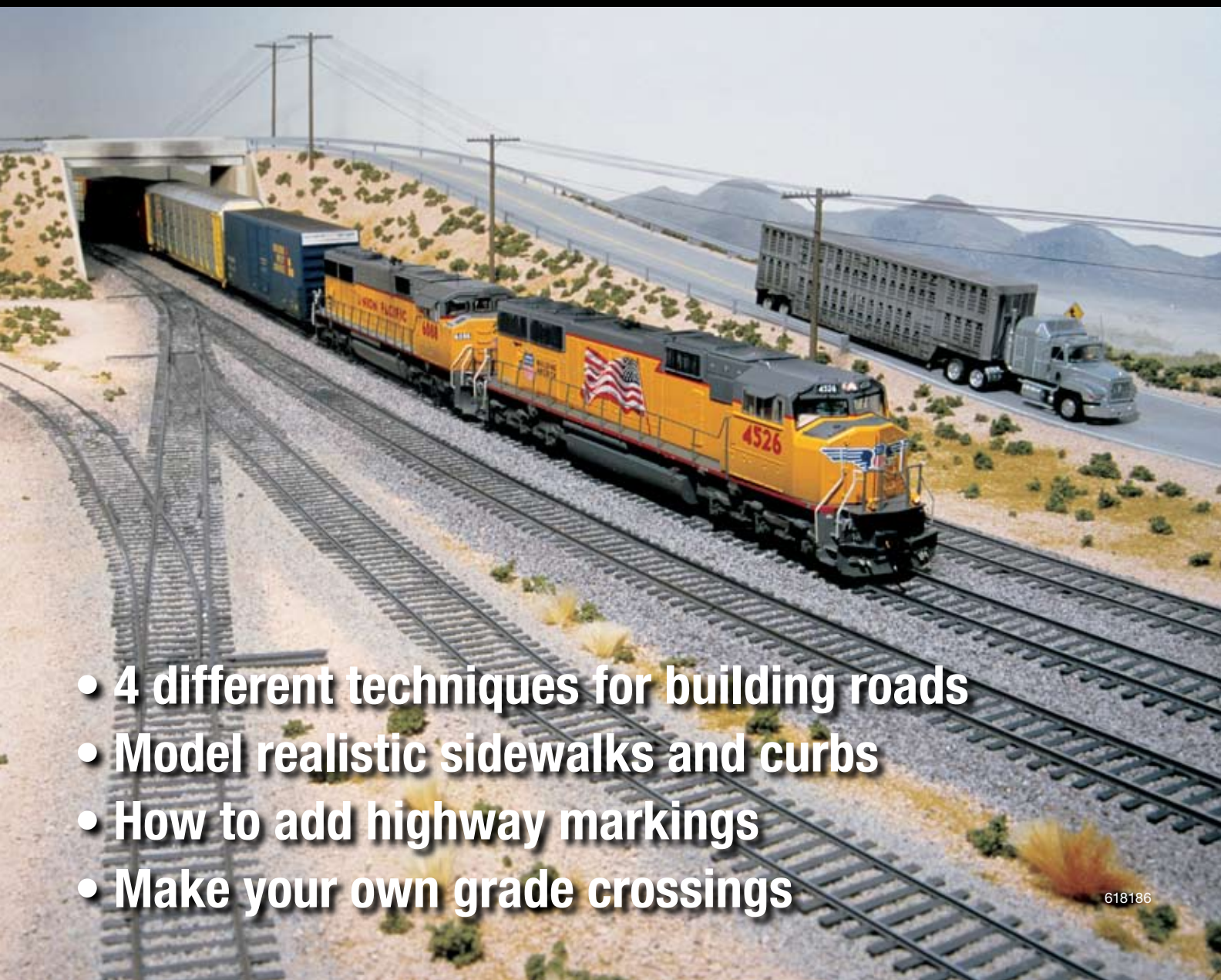


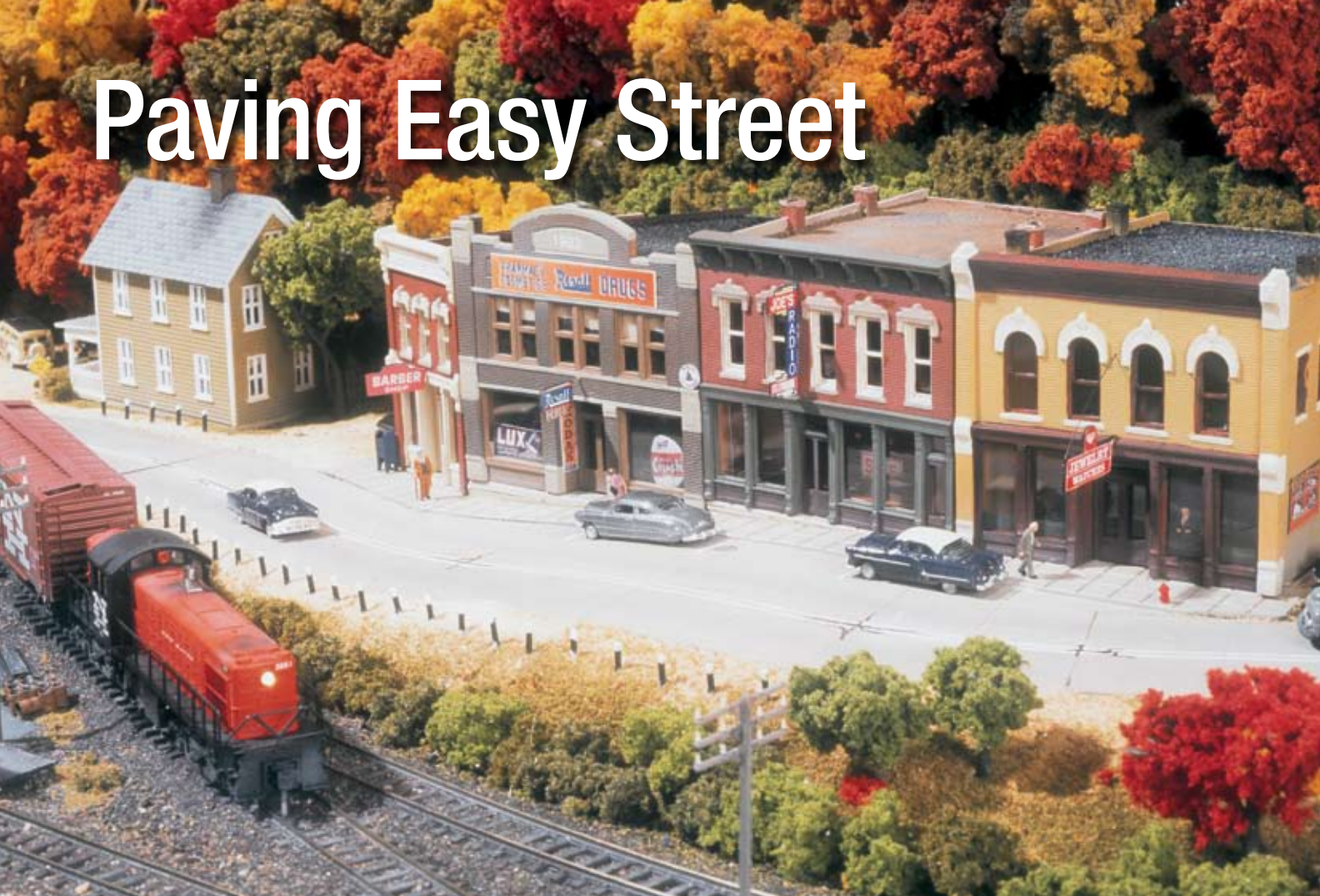
Workshop tips

Roads and streets



- 4 different techniques for building roads
- Model realistic sidewalks and curbs
- How to add highway markings
- Make your own grade crossings

Paving Easy Street



Model roads look best when they are built to the proper size. By planning for the streets and roads at the same time you design your layout, you can be sure you have enough room for them. David Popp photos

Just as your trains need tracks, your vehicles need roads. After all, building a model railroad layout is all about modeling transportation systems. To that end, our model streets and sidewalks should be given a degree of care similar to what we give our model railroad rights-of-way. Unfortunately, all too often the roads we see on model railroads are put in as afterthoughts. Since the remaining space isn't always sufficient to fit a roadway, the modeled roads end up too narrow or change elevations or directions unrealistically.

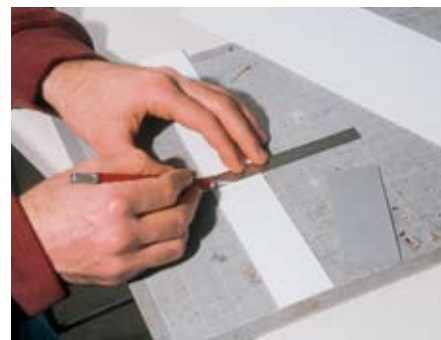
When planning your model railroad, it's best to also include the roads in your design. There are many different types of roadways, and depending upon the era and region of the country you model, street and road sizes and construction will vary. Wherever possible, it's best to consult the real world and either take firsthand measurements, or at least make estimates by consulting period photos.

As shown on the following pages of this booklet, there are a number of different ways to model roads. One of my

favorites uses ordinary styrene sheet (shown in the photos on this page) to simulate both asphalt and concrete surfaces, including sidewalks. I use .030" styrene because it's flexible enough to follow scenic contours, yet provides a smooth, finished surface. The styrene can be scored and snapped for straight cuts, as shown in the photo at right, but can also be easily cut with scissors for making smooth curves. You can cement the styrene road to your layout using ordinary latex caulk.

Finishing styrene streets is equally easy. After lightly sanding the surface with a fine-grit sand paper, you can spray the road with your choice of acrylic paints. Once the paint has dried you can add stripes (shown below right), cracks, and expansion joints using paint pens.

Whatever method you use to build your streets, boulevards, and thoroughfares, you can rest assured that if you plan ahead and build them following the prototype, they will realistically enhance your layout. – David Popp, managing editor



Making roads from .030" styrene sheets is easy, and you can cut the material by scoring it with a hobby knife and snapping the parts out of the sheet.



You can add details to your streets, such as lane stripes, cracks, and expansion joints, with fine-point paint pens, available in craft stores.



Modeling modern highways

Build realistic highways from common materials using simple techniques

By Pelle Søbørg
Photos by the author

Whether they're two-lane highways through backwater country or heavily traveled routes with overpasses, roads are an important part of any model railroad. Besides being key scenic elements, roads can add a lot of interest and variety to your layout.

There are a few principles to keep in mind when modeling roads. First, they tend to follow terrain contours more closely than rail lines do, because motor vehicles can handle steeper grades and have shorter wheelbases. It's also much

easier to build roads around rocks (or hills) than trying to go through them.

The second key to modeling realistic roads is to make sure the lane widths are prototypical [see sidebar on page 6 – *Ed.*]. The roads on many layouts I've seen in both the hobby press and in person are generally too narrow.

It's also good practice to have smooth, gradual curves wherever the road bends. Tight curves, while occasionally used in real life, don't look very prototypical when used on a layout. This principle should apply to vertical curves, as well; when a road begins to ascend or descend a hill, the transition should be smooth, not sudden.

Getting over it

In the real world, towns served by railroads need to have at least one spot where vehicles can cross the tracks. By doing so, traffic continues flowing and emergency vehicles are able to get around a train without delay.

Years ago, when trains were shorter, grade crossings were an adequate solution that allowed vehicle and rail traffic to coexist. However, modern trains are much longer and can block multiple grade crossings at one time. To alleviate the traffic congestion caused by long, slow-moving trains, many municipalities have turned to building overpasses.



Building realistic roads for your model railroad isn't as difficult as it may seem. Follow along as Pelle Søbørg shares his techniques for modeling modern roads on his HO scale Union Pacific Danville Subdivision layout.

I installed an overpass on my HO scale Union Pacific layout [featured in the March 2005 issue of *Model Railroader* – Ed.] for two reasons. First, I model the modern era, when an overpass would be a logical way for the road to cross the tracks. Second, and more important, the overpass hides the tracks heading into staging.

Follow along as I describe how I built roads and the overpass. Even though my roads are in HO scale, the techniques I'll show can be adapted to your favorite scale. **MR**

Pelle Søbørg is a frequent contributor to Model Railroader magazine.

Building the road



Pelle used straight pins and flexible dowels as a guide for modeling curved roads. He traced the outside edges of the dowels with a pencil and then removed the pins and dowels.



With the road's course penciled in, Pelle laid strips of Woodland Scenics Paving Tape along the outside edge of the guide lines.

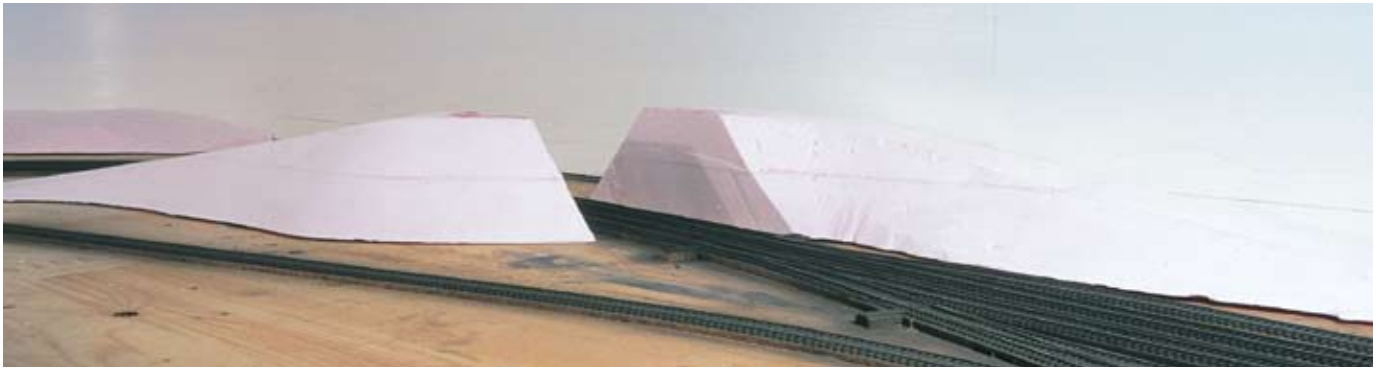


To model the road surface, Pelle used Woodland Scenics Smooth-It. After the first layer (shown here) had set, but wasn't completely dry, Pelle applied a second layer of the plaster-like road material.

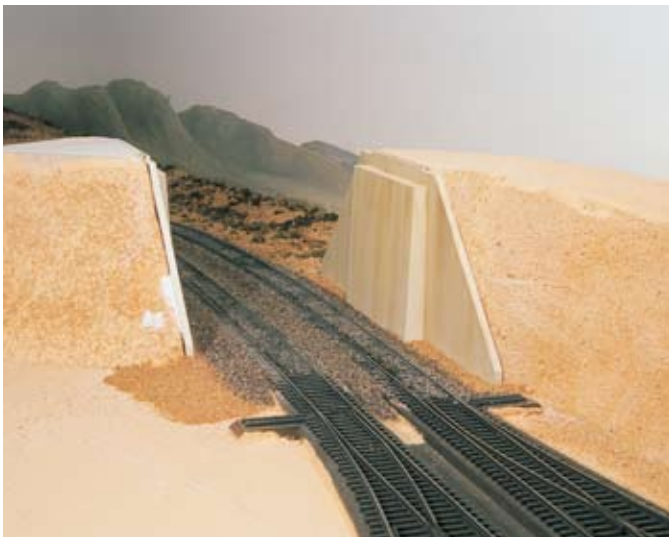
The easiest method I've found for making smooth curves in roads is tracing lines along flexible wood dowels. First, I position the dowels where the edges of the road will be. I then use pins to hold the dowels in place so I can trace lines along the outside edges.

Next, I applied Woodland Scenics Paving Tape along the outside edges of the pencil lines. Once I had the adhesive-backed foam tape on both sides of the road, I mixed up a batch of Woodland Scenics Smooth-It. I poured the first coat and let it set, but not dry, and then put a second coat over it. The finished road has a realistic surface with a few dips and bulges, just like you'd find on the real thing.

Bridging the gap



Pelle used 2"-thick extruded-foam insulation board for the embankments approaching the overpass.



I built the embankments using pieces of 2"-thick extruded-foam insulation board. Then I used a serrated bread knife to cut the slopes of the embankments at 45-degree angles.

Next, I painted the foam with a water-based earth color and applied sifted sand on the embankments with the paint still wet.

I then turned my attention to the abutments and bridge. I made the abutments from .040" and .060" styrene sheet. The bridge is a Rix Products kit cut to fit.

I used an airbrush to spray the bridge and abutments with a mixture of Model Master paints: one part White, one part Gull Gray, and one part Sand. I weathered these parts with powdered pastels and attached the abutments with Woodland Scenics Foam Putty. Since the track still had to be ballasted, I didn't glue the bridge in place.

To prevent the pink foam from showing through the scenery, Pelle painted the embankments with a water-based earth color. He applied sifted sand to the embankments while the paint was still wet.

Modern road prototypes

The key to building realistic roads is knowing some of the standards of the prototype. To learn road specifications for the area you model, contact your state department of transportation or visit its Web site. Federal road specifications, including pavement markings, can be obtained from the Federal Highway Administration. The *FHA's Manual on Uniform Traffic Control Devices* can be read online at <http://mutcd.fhwa.dot.gov>. – *Cody Grivno, associate editor*

- Rural principal arterial highways and modern, lower-class rural roads have 12-foot traffic lanes. Roads have 2 to 3 percent cross-slopes so water will drain properly.
 - Shoulder width is determined by the traffic volume. Most paved and graveled shoulders have a 4 percent slope.
 - Typical road stripes are 4" to 6" wide and 10 feet long with 30-foot gaps between stripes.
 - White stripes separate traffic lanes flowing in the same direction, while yellow stripes separate traffic lanes flowing in opposite directions.
 - Railroad crossing pavement markings consist of an 8 x 16-foot white X with a 20-foot R on each side. The width of the X can be adjusted depending on lane width.

Painting and striping



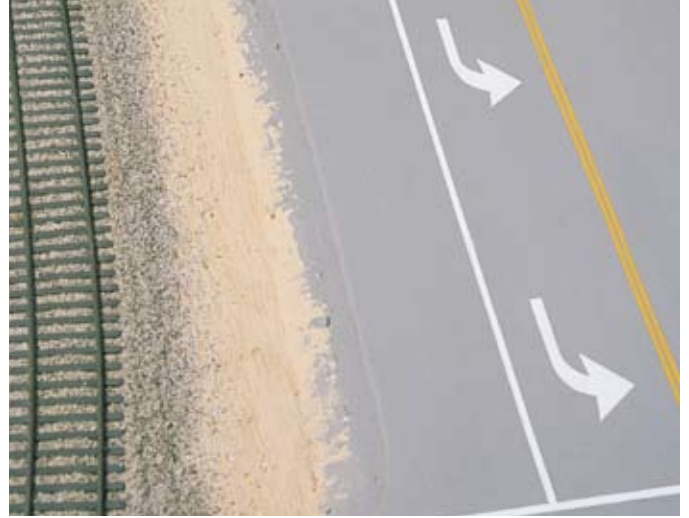
Pelle used a mixture of Model Master Gull Gray and Sand to paint the road on this layout.

After the Smooth-It set, I painted the road surfaces with a mixture of Model Master Gull Gray and Sand.

Then I painted the road striping. My hand wasn't steady enough to do this freehand, so I masked the outline of stripes with $\frac{1}{8}$ " and $\frac{1}{16}$ " tape. I cut my own left-turn arrow templates from airbrush masking film. Before I painted the stripes, I rubbed down the edges of the masking tape. This helped prevent the paint from creeping under the tape.



Next, Pelle masked the road stripes using $\frac{1}{8}$ " and $\frac{1}{16}$ " tape. He cut the left-turn arrow templates (right) from airbrush masking film, a product available at most art supply stores.



Once the paint was dry, Pelle removed the masking tape to reveal prototypical road striping with crisp edges. At this point the roads are ready for weathering.

Finishing touches

To give the roads added realism, I weathered them with powdered pastels. I dipped my finger in black pastel powder and used my fingertip to smudge the powder down the center of each lane to simulate spilled oil from vehicles.

Then I added gravel shoulders along the edges of the pavement. I also randomly glued various shades of clump foliage along the shoulders.

Finally, I installed guardrails and computer-generated road signs. The motorists on my UP Daneville Subdivision layout will now be ready to safely travel over the road.

Pelle finished his project by weathering the roads with powdered pastels, adding gravel shoulders, and installing road signs and guardrails.



Scenicking embankments

When I was building the embankments for my viaduct, I cut the slopes at a 45-degree angle. While this looks prototypical, it's difficult to keep ground foam in place on steep slopes. After several mishaps, I developed a technique to keep everything in place.

I started by painting the embankments with earth-colored paint. With the paint still wet I applied a layer of sifted sand. The sand gives the embankments some "tooth" for the other scenery material to stick to.

Once the paint was dry, I wet the embankments with diluted white glue and added sifted Arizona Rock & Mineral Low Desert Soil. I wet the area again and randomly applied Woodland Scenics clump foliage that I'd soaked in water (the soaked foliage won't roll away). Then I applied a second coat of diluted white glue to keep the scenery in place.

Next, I ballasted the tracks using Arizona Rock & Mineral Co. Northern Pacific Gray Granite. I then wet the ballast with a mixture of water and rubbing alcohol (the alcohol breaks the surface tension of the water). To secure the ballast, I applied a 50:50 mixture of water and white glue.

I finished the scene by installing a Rix Products bridge. To give the bridge added realism I used black powdered pastels to simulate soot stains where trains pass under. – P.S.



Pelle applied sifted sand to the embankment when the paint was still wet (above). The sand helped prevent the scenery material (below) from sliding down the embankment.





Taking it to the streets

Add detail to your roadways

By Michael Tylick • Photos by the author

Although we spend a lot of time traveling on streets, we usually don't pay much attention to what they look like. But there's considerably more to a street than the simple strips of pavement most modelers use on their layouts. Litter, weeds, and other items (seen in **fig. 1**) that indicate people inhabit the area make a model street look real. Since my O scale Bay Path Traction layout has a significant amount of street running, it was crucial to go beyond the common cracks and oil spills by adding extra detail to my roadways, from cracks in the sidewalk to individual bricks to abandoned newspapers.

Roadways with style

I think textured street surfaces add a lot of visual appeal. Besides looking

good, the brick street corners I added to a few scenes also help identify which era I set my layout in. I began work on the bricks by mixing equal parts of Sculptamold and USG Special White ceiling plaster. This created a putty that set quickly but remained soft and easy to work with for days. I then used a dental pick to hand carve the bricks (**fig. 2**).

Next I applied a primer coat of shellac over the putty so I could paint it with latex paints without softening the plaster. I could have added a few grassy spots at this point, but grass tends to be much less common on busy streets like the ones I'm trying to model.

Note that the concrete roads shown in the photos have street trackage with paving blocks carved between the rails.

Fig. 1 Details. Trash cans, strewn newspapers, and cracked concrete add to the realism on Mike Tylick's O scale Bay Path Traction layout.

This was a common practice during the days when the trolleys ruled the roads. Rather than digging up the concrete when track maintenance was necessary, it was easier to remove and replace the paving blocks. Asphalt paving didn't come into wide use until after most trolley trackage was removed, and in some places a good deal of track is still buried under the asphalt.

Cracks and tracks

After detailing the roadway, it was time to focus on the sidewalks. I copied the technique used to make grassy side-



Fig. 2 Brick (above). Mike made a base of Sculptamold and ceiling plaster for his streets. He hand carved the individual bricks with a dental pick.

Fig. 3 Construction scene (right). Sewers and other pipes often need to be repaired or replaced. Mike modeled this work site with lots of details.

walk cracks in Bruce Goehmann's traction layout article in the July 1980 *Model Railroader*. The process he used was a simple one: he brushed a little white glue over the crack, sprinkled on some fine ground foam, and simply blew away the excess. What was left behind looked terrific. You can achieve greater texture with coarse foam, static grass, or Scenic Express Mininatur grass tufts, but don't overdo it – very few sidewalks actually look that bad.

Seldom-used track will sometimes have grass growing between the guard rails. However, the track on my layout is still in service, so I left the flange-ways clear. Even O scale freight cars don't weigh enough to push the growth out of the way.

A construction site

Underground piping always needs work, so a street excavation site seemed fitting. I modeled the scene in **fig. 3** by removing the foam scenery base, adding some dirt walls, and installing a few protruding pipes. I piled dirt and broken pavement along the site's edges.



I couldn't find O scale sawhorses, so I built some using styrene strip. The figures here are from a Life-Like worker set – most scales have similar figures available. I could have dug up some paving blocks to indicate track maintenance, but decided that two construction sites would be excessive.

Junk and stuff

The storm sewers in my streets are commercial castings from Q-Car Co., but you could easily fashion your own from mesh material. The newspapers that seem to have blown all over my lay-

out are enlarged photocopies of those supplied with an HO scale structure kit.

I completed the streets on my layout by adding a few basement elevators, signposts, fireplugs, mailboxes, trash cans, and some other easily obtainable commercial details. Now my roadways look closer to what my research shows real streets looked like during the period I chose to model. **MR**

Michael Tylick is a frequent Model Railroader contributor and a custom model builder, specializing in structures and rolling stock.



If your model citizens drive on unrealistic roads, perhaps it's time to start a highway improvement project.

Roads and grade crossings

Making realistic highways from styrene sheet

By Marty McGuirk • Photos by the author

Roads and highways are important to just about any layout because they add life and a sense of action. They also help set the layout's theme, time, and place. And the best part is that it's easy to make realistic and good-looking roads and grade crossings.

Model roads

All sorts of materials have been used to make roads, including cardstock, cork, plaster, and even real tar. Some manufacturers offer ready-made roads. In HO scale, Walthers offers plastic city streets, sidewalks, and a modern grade crossing. For N scalers, Fine N Scale (www.finen-scale.com) has an assortment of sidewalks and curbs. Busch, Faller, and Noch offer peel-and-stick flexible foam road and street sections in both scales.

Styrene highway

My favorite material for modeling paved roads is styrene sheet, because it's smooth, flexible, and easy to work with. For this article I built a short stretch of road atop a foam board surface, but styrene roads can also be built directly over existing scenery.

Once you know the path the road will follow, draw two lines at least 24 scale feet apart. This will give you two 12-foot lanes, ideal for layouts set in the 1950s.

Next, cut a piece of .030" plain styrene sheet 24 scale feet wide. Straight roads like mine are easy, but it's not hard to cut curves into the styrene. If you're building a long road, hide any seams between individual sections with filler or start with a large sheet. (Styrene is sold in 4 x 8-foot sheets at most plastic supply houses.) I

used two pieces of styrene, trimming to match the track angle.

The crossing

Before attaching the road to the foam board, I built the crossing. Crossings vary widely depending on the era you model. Early crossings were earth piled between the rails. Later, wooden planks were used. Pavement, with timbers on either side of the rail like the example in **fig. 1**, was also common. Today, steel plates or hard rubber mats are used. My layout is set in the 1950s, so I prefer wood crossings.

I used Kappler Kontour HO scale ties. Use cyanoacrylate adhesive (CA) to attach several ties to the outside edge of both rails the full width of the road. To get these level with the top of the rails, I added a .030" styrene shim between the Kap-

pler and plastic ties on my Atlas flextrack. Then I added the planks between the rails, staggering the ends (**fig. 2**) so that the joints weren't next to one another. Before gluing them, I ran a train car through the crossing to check the flangeways.

Prototype wooden crossings have angles cut in the ends of the boards to help dragging equipment pass up and over. I angled the ties with a sharp hobby knife, then stained them Floquil Maple.

On the road again

I secured the styrene road to the surface of the layout with latex Liquid Nails. After the cement had set overnight, I scribed expansion joints into the styrene every 12 feet. I like to add jagged cracks with a hobby knife. A lot of cracks will make the road will appear older and neglected; fewer cracks reflect a newer or better maintained roadway. See **fig. 3**.

With that done, I blended the edges of the road into the surrounding area with Sculptamold, paying special attention to any gaps caused by the road climbing to track level.

Finishing touches

I painted the road with Badger Model-Flex 16-99 Flat Gull Gray. Any medium gray color would do, but stay away from black. It's almost impossible to make a black road look realistic under indoor lighting, and only brand-new asphalt ever looks truly black.

All sorts of crossing signals are available, ranging from crossbucks to operating gates and flasher. I added a crossing flasher set and a yellow RR crossing sign, both from N.J. International. The gates and flashers can be made to operate, but that's beyond the scope of this article.

Weathering (**fig. 4**) is needed to bring out the detail scribed into the styrene. I applied a generous quantity of black powdered pastels directly to the road, then used a soft brush to spread it over the surface. I used my finger to remove most of the pastels from both sides of the traffic lanes, leaving dark streaks down the centers.

I use Post-It Notes to mask the traffic lanes, dabbing Polly Scale Reefer White paint directly onto the road (**fig. 5**). As a general rule, model railroads set in an earlier era should have fewer markings on the streets than modern-era layouts. I added a center line to my road and a stop line before the crossing.

The best advice I can offer is this: next time you're out driving, notice the details found on any street. Then try to incorporate those into your layout. **MR**

Marty McGuirk is a former associate editor of Model Railroader.



Fig. 1 Prototype grade crossing. Grade crossings have changed since Douglas Smith took this photo in 1958. Note the paved crossing with timbers on each side of the rails, the manual gates, and the crossing shanty.

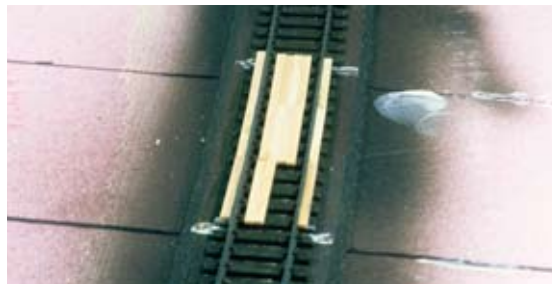


Fig. 2 Planked crossing. Marty used CA to secure "Kontour" HO scale ties to the plastic ties between and alongside the rails. It's a good idea to test-run a freight car through the crossing before gluing anything down.



Fig. 3 Adding cracks and joints. Use a sharp hobby knife to scribe expansion joints and cracks into the surface of the road. Don't get too carried away with this step!



Fig. 4 Weathering. The painted road and finished scenery look okay, but the road lacks signs of use. Rubbing in powdered pastels takes care of that.



Fig. 5 Striping. Marty used Post-It Notes to mask off the areas to be lined and used a stiff brush to dab on the paint. Don't apply too much paint at once, or it can seep under the mask.



Details such as street signs, fire plugs, catch basins, speed limit signs, power poles, and call boxes bring Burlington, Vt., to life on Lou Sassi's diorama.

Model realistic streets and sidewalks

The key is paying attention to the details on the street where you live

By Lou Sassi • Photos by the author

We all know what streets and sidewalks look like; however, when modeling them, it's a good idea to go outside and take a glance. Details such as telephone poles, street signs, manhole covers, and other objects can be easily passed over.



Fig. 1 Finishing the surface. Lou Sassi uses a putty knife to smooth Concrete Patch, a modeling material similar to spackling compound, between the masking tape forms.

Starting construction

Let's begin the project by laying down some asphalt and curbing and installing manhole covers and catch basins (storm drains). I modeled my scene circa 1955, but if you happen to model more recent times, you'll want to substitute details that suggest a more modern period.

Begin by using a pencil to draw the edges of the street on your layout base (25 scale feet wide). Next, lay down seven layers of masking tape along the outside edge of each line. These will serve as forms between which you'll spread your blacktop material. Your next step is to glue the catch basins in place.

Use an artist's spatula to spread Bondex Ready Mixed Concrete Patch over the scenery base. This concrete patch, from DAP Products, Inc., is a latex-based construction material that's similar to spackling compound, but grittier. Work the material carefully around the edge of the catch basins. Use a 4"-wide putty knife, as shown in **fig. 1**, to span the masking tape on each side of the pavement. Draw the putty knife slowly along the length of the road, smoothing out the Concrete Patch in the process.

The roadway doesn't have to be super smooth, especially around the pre-installed catch basins. When you're satisfied that the surface is as smooth as you're going to get it, run a hobby knife blade between the edge of the road and the masking tape. Then carefully peel away all seven layers of the tape.

After the material has set for about 15 minutes, gently tap the surface with your finger to remove any irregularities. Don't wait too long, because once dry, Concrete Patch becomes very hard.

Curbing

While waiting for the Concrete Patch to dry (about two to three hours), use a hobby knife to notch out lengths of .080"-square styrene strip (as much as you think you'll need for your curb-

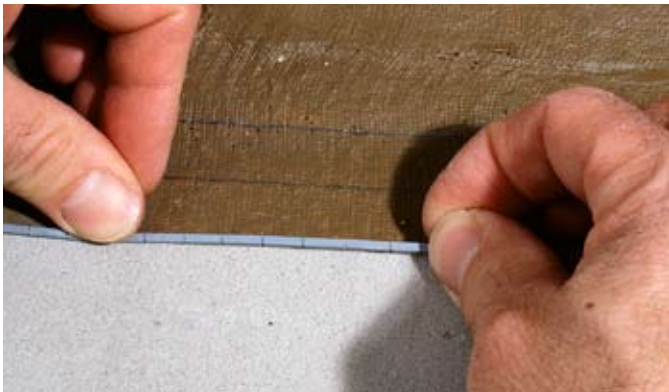


Fig. 3 Adding curbing. When the Concrete Patch and paint are completely dry, Lou cements gray-painted strips of styrene curbing along the top edge of the road.

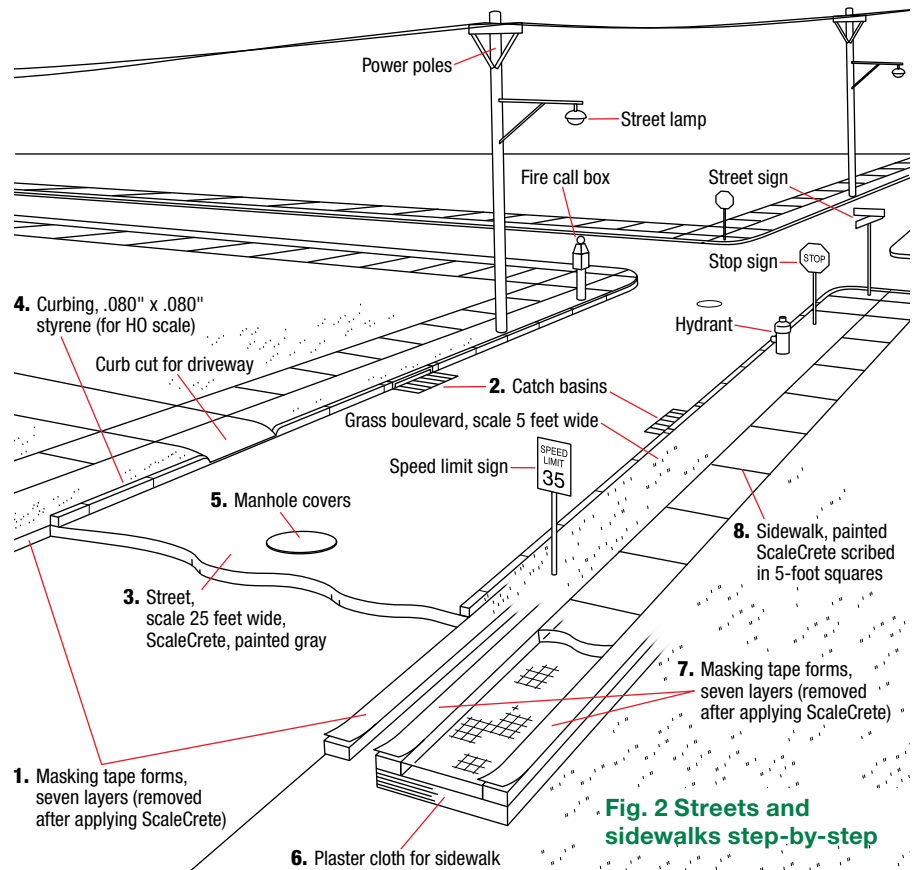


Fig. 2 Streets and sidewalks step-by-step

Illustration by Theo Cobb

ing) at 4-scale-foot intervals. Then spray the strips with a concrete-color paint. I used no. 414116 Polly Scale Reefer Gray.

When both the paint and the Concrete Patch have dried, install the curbing along the top edges of the Concrete Patch, as shown in **figs. 2 and 3**, using tube-type styrene cement to glue it to the road surface. Leave openings in the curbs where you intend to put driveways, as illustrated in **fig. 2** above.

"Sure," you say, "styrene might make good curbing, but how do I bend it around corners at street intersections?" Fear not, for in a fit of inventiveness I discovered a technique for bending styrene to make curved curbing. Begin by

laying the styrene strip over a length of $\frac{5}{8}$ "-diameter brass tubing while heating the plastic with a hair dryer. When the styrene becomes hot and flexible, carefully bend it around the tubing to form a tight radius, as shown in **fig. 4**. After it cools, glue the styrene in place on the road base.

Install manhole covers by drilling a hole in the road surface that matches the size of the covers you're using. In my case, the covers were a little larger than the holes, so I used a hobby knife to slightly enlarge the holes. After making sure your manhole covers fit properly, apply a drop of white glue to the bottom of each and press them in place.

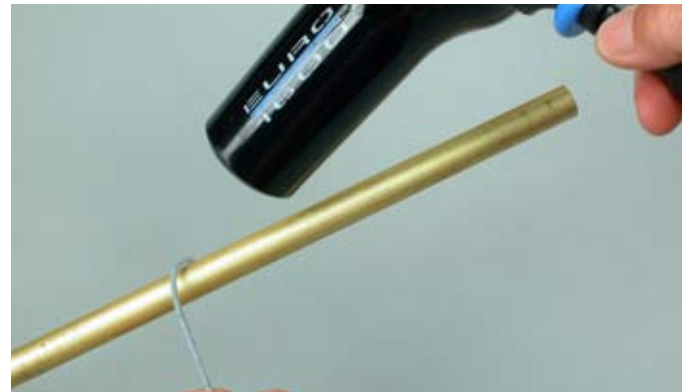


Fig. 4 Bending curbing. Lou applies heat from a hair dryer to an .080"-square strip of styrene and then bends the softened styrene curbing over a piece of brass tubing.



Fig. 5 Laying the base. Strips of plaster cloth, five layers thick, make up the sidewalk base. It should be roughly level with the top of the curbing.



Fig. 6 Finishing sidewalks. Having spread Concrete Patch between masking tape forms, the author uses a hobby knife to suggest expansion joints in the concrete sidewalk and add cracks to make the model look realistic.

Boulevards and sidewalks

Use Concrete Patch to represent the sidewalks adjacent to the streets. There's a 5-foot-wide grass area between the sidewalks and roadways in my neighborhood. To model the sidewalk, apply five layers of no. 1203 Woodland Scenics plaster cloth where your sidewalk will be, approximately 5 scale feet wide and 5 feet away from the curbing, as shown in **fig. 5**. This will bring the base of the sidewalk up to the same level as the top of the curbing.

Paint the gauze with the same earth-tone paint you used for the rest of your scenery. Build the sidewalk just as you did the roadway by spreading Concrete Patch between masking tape forms on top of the gauze. Use a pencil to mark the masking tape on both sides of the walk at 5-foot intervals so the walk looks as though it had been poured in 5-foot-square sections. The pencil marks will help you align the expansion joints.

Apply and spread the Concrete Patch between the masking tape forms, just as you did with the street. While the Concrete Patch is drying, run a hobby knife along each edge of the sidewalk. Then, using the pencil marks on the masking tape as guides, scribe the seams between each 5-foot section, as shown in **fig. 6**. After you've cut in all of the sections, remove the masking tape forms. Give the Concrete Patch about 15 minutes to dry, then use your hobby knife to scribe random cracks in the concrete.

Finishing steps

Brush-paint the road with full strength Polly Scale no. 414137 Grimy Black while the walks are drying, and then add a second coat of Reefer Gray to the curbing. Next, brush-paint the sidewalk no. 414317 Polly Scale Concrete. Highlight the seams between the sidewalk sections by using a small brush to apply a coat of India ink and alcohol (1 teaspoon ink to 1 pint rub-

Suppliers list

Details along your streets and sidewalks will undoubtedly vary from those used in this project. Below is a partial list (with Web sites or e-mail addresses) of suppliers of materials you might use on your layout. Check your local hobby shop or Web sites for availability.

Crossbucks and other trackside details

Creative Model Associates
www.tichytraingroup.com

Curbing (styrene strip)

Evergreen Scale Models
www.evergreenscalemodels.com

Paint

Polly Scale (Floquil)
www.testors.com

Plaster cloth

Woodland Scenics
www.woodlandscenics.com

Poles

Rix Products
www.rixproducts.com

Bondex Ready Mixed Concrete Patch

DAP Products
www.dap.com

Street details

SS Limited (subsidiary of Jaks Industries, Inc.)
www.jaksind.com

Street signs, stop signs, and other urban details

Blair Line
www.blairline.com

bing alcohol) along each seam. Weather the pavement, curbs, and walks by brushing on some powdered pastels.

Fire protection and traffic control

Add the fire hydrants and call boxes after applying ground cover between the roadway and the sidewalks. Install traffic and street signs to keep your scale people from getting lost, speeding, or crashing at intersections. Finally, crossbucks protect the railroad crossings while poles carry power and telephone service to your neighborhood. **MR**

Lou Sassi is a long-time contributor to MR and is the author of three of our model railroading scenery books.