

Paper-Shell Scenery: A Cheap, Quick, and Clean Approach to Landscape Modeling

By Ian Clarke

Treasurer – London Model Railroad Group; Member – The Buffers, Canadian Association of Railway Modellers, Train Collectors Association; Chief Engineer – The Railway on The Parkway

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Creating model railroad scenery doesn't have to be a challenge, nor does it have to be costly, messy or seemingly irreversible. Over the years, I've taken many approaches to scenery on my various 3-rail, O-gauge layouts, from flat tabletop with green felt expanses, to plaster-shell mountains reaching to the ceiling. Then I discovered paper-shell scenery, for which I am indebted to Howard Zane's excellent article in the January 2007 issue of *Railroad Model Craftsman*.

The timing coincided nicely with the development of what was to be the final Allentown-Clarksburg Railroad in my basement in central New Jersey. I had just finished the entire basement, including a fully carpeted 38'x24' train room. While I had used plaster cloth to make scenery on the layout that preceded this new one, I was loath to deal with the attendant dust and mess in my brand new room. Plus, even though I bought the cloth in bulk from the manufacturer, it still wasn't cheap, and the new layout would be bigger than the last.

So Zane's technique, which is quick, cheap, creates little mess, and is readily modifiable at will, was my saviour. What I really like is that if you aren't happy with the result, you can just cut it out with a utility knife and redo it until you are satisfied. The mess is minimal, and the cost, negligible.

Obviously no scenery technique is perfect or suits every situation, but this approach offers considerable flexibility. There's little risk in experimenting with it; you'll probably come up with something that works for you in short order.

In summary, this technique is a winner for me because:

- 1) It's quick: the initial module took me less than an hour, with the odd distraction, like shoos a cat from the garage as it tried to chase down a chipmunk!
- 2) It's cheap: the paper is about \$24/roll and goes a long, long way, literally; glue is available by the gallon; dirt is free in the garden; and the strategic application of commercial ground covers keeps costs down.
- 3) It's readily reversible and changeable.
- 4) It creates minimal mess.
- 5) It's fun, if you discount the hot glue burns!

Below is a step-by-step guide to paper-shell scenery creation with a few tips and tricks I've learned along the way. First you'll need to pull together a few tools and materials.



Warning: Hot glue, as the name indicates, is hot and gets hotter and more fluid the longer your glue gun is on. It can cause severe burns and blistering; trust me, I write from experience! Exercise caution and remember to unplug your glue gun when you're done.

Tools and Materials for Paper-Shell Scenery

Cardboard for lattice strips

Utility knife for cutting cardboard strips

Hot glue gun with extra glue sticks; you don't want to run out in mid-installation

Old paint brush

Red rosin paper (<https://www.homedepot.ca/product/thd-red-rosin-builders-paper-36-inch-x-167-feet/1000756546>)

White glue

Wet water

Diluted white glue

Dried, sifted dirt

Assorted ground covers and clump foliage



Photo 1: Tools and Materials for Paper-Shell Scenery

Paper-Shell Scenery Methodology

- 1) I used a discarded cardboard soft drink case as a base for this small demo module. For the lattice strips, any decently stiff, clean cardboard will suffice. The strip width depends on your scale and how much rockery and forest you plan to support. In O-scale, 1"-1.5" wide works well. First, hot glue a lattice of cardboard strips conforming to the landscape profile you want to create; you can glue strips to each other to make longer lengths (Photo 2). The lattice can be tight or open depending on your application; it typically can be less "solid" than you think. Tall lattices for mountains can be supported from your benchwork with a 1x2 or two. Once the whole thing is in place, those supports can even be removed if desired.



Photo 2: Completed Cardboard Lattice

- 2) Use wider and/or a few more strips where you might want to install rock formations or heavy trees, especially in larger scales (Photo 3).



Photo 3: Reinforced Lattice

- 3) Hot glue red rosin paper to the lattice, going from the bottom of inclines up, so upper paper pieces overlap the lower ones (like roofing tiles). Apply the glue to a small area at a time so you can secure the paper to the lattice before the glue cools. You'll want to briefly pinch the paper and cardboard together until the glue cools (Photo 4).



Photo 4: Hot Glue Applied to One Strip

- 4) Avoid hard seams and edges, nothing is ever straight in nature, and the edges of your scenery sheets shouldn't be either. My technique to overcome straight edges is to apply a crooked bead of hot glue to the base, whether it's sub-roadbed, cardboard lattice, or another piece of red rosin paper. Press down on the paper to spread out the hot glue and let it cool. Once cool, slowly rip the paper back along the

glue line, securing the glued paper with your other hand to it doesn't rip too much. You want an uneven edge that's stuck down with glue (Photos 5, 6, and 7).



Photos 5, 6, and 7: Edge Gluing; Completed Scenery Base

- 5) On the layout, work on no more than about 4 square feet at a time so things don't dry out too quickly; spraying a little wet water will reinvigorate it, but be careful not to cause runoff that will wash away ground cover.
- 6) Paint undiluted white glue (available by the gallon at big box stores) onto the red rosin. I lightly spray it with wet water to make it a little more paintable and use an old paint brush to distribute it evenly across the surface. You can leave it to dry and reactivate it later by spraying a little water spray. I prefer to work while it's wet (Photos 8 and 9).



Photos 8 and 9: White Glue Application

- 7) Sprinkle screened dirt over the wet glue to create an earth base. It's free in the back yard; just make sure it's sifted to your scale, dry, and free of debris and insects (Photo 10).



Photo 10: Dirt Application

- 8) Sprinkle desired ground covers, vegetation and debris (Woodland Scenics, Scenic Express, etc., or your own) in top of the dirt. With the dirt base, you'll find that you don't need to use much purchased product to get a realistic effect (Photo 11). Randomness is best; avoid uniform application of ground covers by varying how you shake the material onto the surface.



Photo 11: Ground Cover Application

- 9) Mist it all with wet water; avoid drips, runoffs, and pooling. This will ensure the diluted glue in the next step spreads evenly throughout the scenery.
- 10) Sprinkle/spray diluted white glue (roughly 1/3 glue:2/3 water) all over, avoiding puddling (paper towel will wick away any excess). If any drops wash away your ground cover, a light sprinkling of ground cover between your thumb and forefinger will usually hide it (Photo 12). Note the lack of mess, and I wasn't really trying to be neat (Photo 13).



Photos 12 and 13: Diluted Glue Application; Not Much Mess

- 11) Let everything dry thoroughly before touching it or doing anything else or you'll just create a messy slurry! Depending on the heat and humidity, it can take a day or two for things to dry completely.

- 12) Then you can add trees, bushes, rock formations, etc. Just drill or cut holes in the paper shell and cardboard lattice, glue in the feature, then blend it in with small patches of the rosin paper and the various ground covers and/or shrubbery using the same techniques.
- 13) For the demo module, I contemplated showing the one side without ground cover or to reveal the lattice underneath. I ended up cutting out the paper and then opting to repaper it. Note how I feathered the seam and added a patch where I ended up with a small hole (Photo 14). These are invisible once the ground cover is in place (Photo 15).



Photos 14 and 15: Gluing Seams; Ground Cover Application

- 14) I also decided to add a tree to the reinforced lattice, along with a small rock formation. I slit a hole for the rock, rolling back the scenery so I could use it to overlap the rock (Photo 16). I hot glued it in place and glued the scenery back around it, using small patches of the cut material to fill in any gaps (Photo 17). It all gets hidden with glue, dirt and ground cover and left to dry following the methodology above.

The rock is lightweight plaster of Paris; it was a bit beat up from transportation, so I touched it up with some earth tone paints and finished it off with a black India ink and alcohol wash to give it more contrast.

I drilled a hole for the tree in the reinforced part of the lattice and secured it with hot glue. The tree is a metal armature to which I had long ago glued Black Poly Fiber (sic; from MicroMark) and commercial foliage materials.



Photos 16 and 17: Adding a Rock Formation

- 15) Regardless of scenery technique, getting material to adhere to vertical spaces can be a challenge. Small areas with limited verticals usually can be done in situ. For larger areas, such as extensive mountains, prepare the red rosin paper with your base ground cover before installing it. You can then add rocks and tress once it's in place on the layout.
- 16) For large vertical areas, unroll a large piece of red rosin paper on the floor, and treat it per steps 5-10.

17) Once the large sheet is completely dry, turn it over, lightly spray the underside with water, and it will become pliable. Turn it back over, drape it over your lattice/framework, cut to fit and glue in place. As it dries, you'll get interesting valleys and crevices similar to those in Photo 18.



Photos 18 and 19: The Finished Product