# "How Bob Rothe gets Plastered"

BMRC Clinic – September, 2015

My Yampa Valley RR got its first plaster scenery over 4 decades ago
"Hardshell" plaster was the "International standard" and, so, was used on the YVRR
Modern thinking has changed to lighter, foam scenery
May have lots of advantages; but too late for me!
YVRR has 3 areas of foam scenery (recent) but not acceptable to me
I lack the skills to produce realistic finished terrain
Sometimes one might need access under the scenery – not so with foam

## Plaster Scenery – the Substrate

Build up a suitable profile: boxes, balloons, wadded newspaper, anything works
Hold together with small tabs of masking tape
Span working area with Al foil andmore small bits of tape
Protect finished trackwork w/ foil, cloth, paper, waxed paper & small weights
4"x6"paper pieces dipped into Soupy **hydrocal** plaster and slap in place overlapping
Next Day, remove the materials making the profile including the Al foil
Work from underneath (open frame) or behind (solid table top)

*Resulting Substrate*

Very strong – easily span 2 to 3 feet without support
Space available –substrate might be less than ¼" thick so tracks can exist under scenery
Coloring – Hydrocal does not (my opinion) accept oil- or water-based paints well

## Plaster Scenery – the Finished Contour

Leave the exposed tracks protected. Plan to work in smaller areas at a time – sq. foot?
Spritz the hydrocal with water to avoid sucking water from the final coat
Mix molding plaster in thin plastic bowls (see later) to consistency of thick cream or thin mashed potatoes. Learn from first few batches.
prepare water with vinegar (retards setting time) and liquid soap (reduces any air bubbles)
Work fast. Have an idea of the final terrain desired. It won't end up exactly that way
Apply with spoon, spatula, fingers, etc over a few sq. inches at a time
Push around with tongue depressor, fingers, popsicle stick, etc.
Work the mix into the final shapes & contours desired
Many final details will occur to you while the plaster is beginning to set
Continue to manipulate, carve, shape, and form the still-wet plaster into realistic rocks

Watch for signs of plaster starting to set
Don't fret when it does. Visualize these natural fractures as real rock formations
I have pushed blobs of setting plaster off the spoon onto the developing scenery letting the cracks in the plaster form a natural outcropping of rock
Switch to sharper, harder, tools: long nail, half a hack saw blade - shape, scrape setting plaster
At some point, recognize that scrapped, loose plaster bits not become part of the final scenery
Walk away for an hour to allow hardening or move to another small area to continue
Later, an Xacto knife can be used to scratch detail into hardened rock faces
Break off protruding chunks that do not look real enough for you (broken edge has great detail)
Repeat the above mixing steps but use a 2nd thin plastic bowl (see later)
At the end of a session, vacuum up the loose fragments. Use brush to loosen more fragments
Visualize your final landscape and start to imagine its final coloring
Where highlights should appear, crevasses should be darkened, mineral content suggested

**Sometimes, Previously Prepared Plaster Chunks Can Be Incorporated into Terrain**

Mix a possibly thinner batch of molding plaster designed to hold precast items in place
Locate the precast rock cut in place bracing as necessary and/or
Locate the preformed boulders, one a time, into the still soft plaster
Use a sharp tool to carve away the "meniscus" formed where preformed piece entered the wet
This "feathers" one piece into the final setting so no joint shows
Shape, carve and "tease" the setting plaster to produce a realistic scene

**Rock Cliffs**

Crumble Al foil and unfold but leave some overriding contour. Place on flat surface
Pour a pretty thin layer of molding plaster onto the foil and let set
Thinner (weaker) portions of the final Cliff/Cut can be strengthened with more plaster
Peel away and discard the foil to expose the surface to be used
Trim (break away) edges to produce final Cut appearance
I also have also used rubber mold castings of real rock containing interesting detail

**Boulder Fields**

Crumble Al foil and unfold and lay flat on a flat surface
Pour a few thick "pancakes" (a few inches in dia and pretty thick) onto the foil
Watch for early signs of plaster starting to set. Touch, probe, nudge to observe this state
Quickly break apart the pancakes into many chunks. They won't break perfectly (good)
Let set doing little to modify their final boulder-like appearance
Broken edges contain lots of rock-like detail (this is what we wanted)

**Scree Fields**

After each thin plastic bowl is emptied of its plaster mix, a residual skin remains.
Flex the thin plastic bowl over a tray to collect the hard, broken chips of plaster residue
See above references to "see below". This is why you need two such mixing bowls

These chips can be sifted into different scree sizes for later use
I often pat the loose chips into the still-wet plaster to ensure firm adhesion.

**White Plaster Coloring**

I prefer artist's oil colors in tubes generously thinned with Mineral Spirits
Acrylic artist's paints in tubes (thinned with water) do not soak into the raw plaster as well
It looks good when it hardens but tends to burst bubbles leaving white pock marks
Raw and burnt umber and sienna and flesh ochre are good basic colors
Use Payne's grey to darken and white to lighten
Experiment with very thin washes of a dark color to flow into the Xacto scratch marks

**Hybrid Combinations**

One can always combine foam & plaster work
Build an approximate substrate contour with foam and cover with plaster
Using the above methods (or similar) for final topography
Though lightweight, a drawback to foam substrate is that the space below is unavailable

**Conclusions**

The number of approaches to building s scenery is virtually unlimited
Only the modeler needs to be satisfied
Practice improves the final result ….
Examples: … How much plaster to mix at one time and the consistency of the wet mix
A botched batch of plaster scenery can be removed for replacement using only a hammer
MODEL RAILROADING IS FUN!