

Mystic Mountain Railroad Major Renovation -- 2014

This year was a turning point for the Mystic Mountain RR in San Jose. Deer and Raccoon damage reached a new level which was unsustainable. Either I fence the yard to keep these critters out or move the railroad to a secure. The fence turned out to be much the less expensive solution. I installed a 7.5' deer fence to protect the Mystic Mountain Railroad.

Now that the RR is safe from Deer and Raccoons, I am undertaking a complete renovation of the railroad. The track needs repair (deer damage and age), structures need repair and painting, bridges need cleaning/repainting or replacement, right-of-way has settled and needs re-grading. So, as long as I'm taking it apart to rebuild it, I decided to see what changes, if any, might make this RR more fun and easier to maintain.

An inspiration regarding what to do to the Mountain Division with its helix-inside-the-mountain hit me so I began there. I've always been somewhat disappointed with my 4-turn helix because so much of the track is concealed. During continuous running for open houses, trains are inside the mountain almost half the time, descending from the top to the bottom, then running in the open back to the top and repeating. I decided to convert from simple loop running to loop-to-loop running, by converting the top level of the helix to a return loop and the same for the bottom level. Trains will then run over the track from bottom to top and then from top back to the bottom, loop around and return. This reduces the amount of time the train is hidden from view. It also frees up some track from the helix to use elsewhere. It improves operations and it reduces maintenance -- a big win all around.



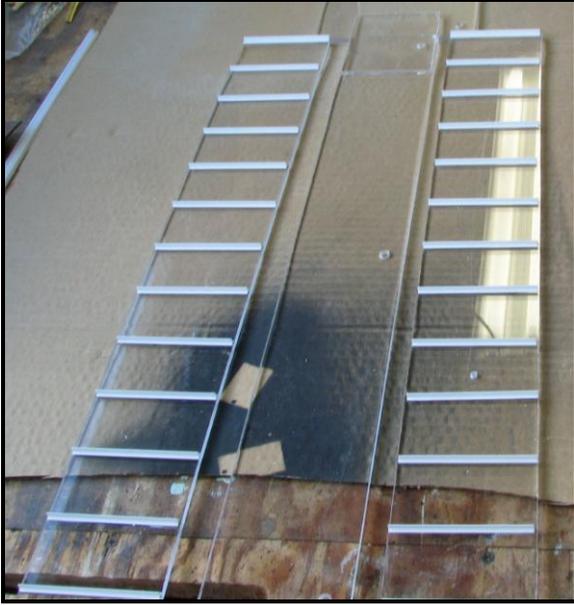
Spare track removed from helix

First, unneeded track was pulled from the helix and the top and bottom return loops configured. I had to re-grade the "Tehachapi Loop" due to earth settling. The two bridges for this loop were severely rusted (one Garden Metal Models, one Eagle Wings Iron Craft) and I decided to custom build replacements from Acrylic.



Rusted bridges to be replaced

I decided to make a single base for both bridges. The side panels are accented with T-shaped bracing for better realism.



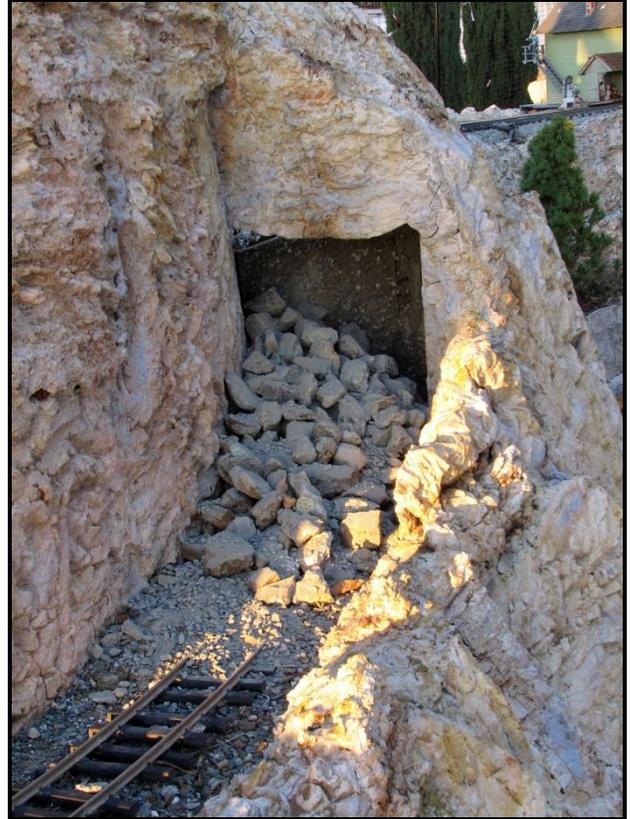
Base plate and deck girder side panels

The whole bridge was assembled in about 5 hours. It was then sprayed with primer and finally, flat black paint. Decals for my railroad were added. The bridges look very much like the original metal ones -- minus the rust. I expect these bridges will outlast me.



Completed Bridges Installed

Once the track in the helix was simplified, there were two tunnel portals that were no longer used. Rather than remove them, I decided to close one of them due to a rockslide.



Rock slide closes this route through the mountains

The other is "abandoned" and boarded up with suitable warning signs (soon).



Just needs a warning sign



Lower Return Loop



Upper Return Loop

I also added a spur on the mountain top to serve the community of Mystic.

You can see trains running through the return loops at:

https://www.youtube.com/watch?v=GFmYoL_2Ic0&feature=youtu.be

The last addition was the Sierra Club Lumber Camp at North End yard. This was added to provide a source for logs for operations to run them to the sawmill. (More about that later)

With the Mountain Division renovated, I moved on to the main railroad. The Mountain Division connects to the main railroad at Union Junction. Here the wye was reconfigured and a spur added with some oil tanks providing a destination for oil products from the Outrageously Expensive Oil Company in Providence. The Interchange track to the Union Pacific railroad was not changed.

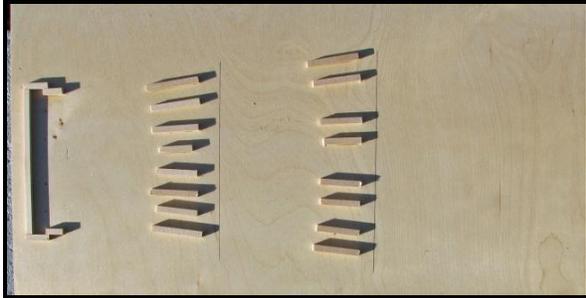


One 14-year old wood trestle leaving the town of Outaluck was falling apart. I built a new 9' long trestle to replace it. While I was at it, I realigned the track for a broader curve.



Old 8' wooden trestle was falling apart

I first made a cardboard template of the top of the new trestle and then transferred it to some sheets of acrylic. I cut them out and glued them together into a single top piece of the trestle. Using temporary supports, I put this in place on the layout and measured the height needed for all the bents. I built a jig to make it easy to make all the bents with a consistent angle and cut the pieces out of 3/8" acrylic bar.



Jig for making trestle bents

Cross pieces for the bents were made from 3/16" acrylic bar; diagonal bracing was made from .1" x .25" styrene strips. Afterwards, the bents were primed with plastic-compatible primer and then painted a dark brown. Absent close inspection, they look like wood.



Trestle bents before painting

I was fortunate to be able to salvage and re-use the track from the old trestle since I had spiked guard rails on it and did not relish repeating that effort.



After screwing the track to the top piece of the trestle, I flipped it over and glued the bents to it, and then glued on the bracing between bents (.1" x .25" styrene strips), and painted them.



Trestle ready for installation



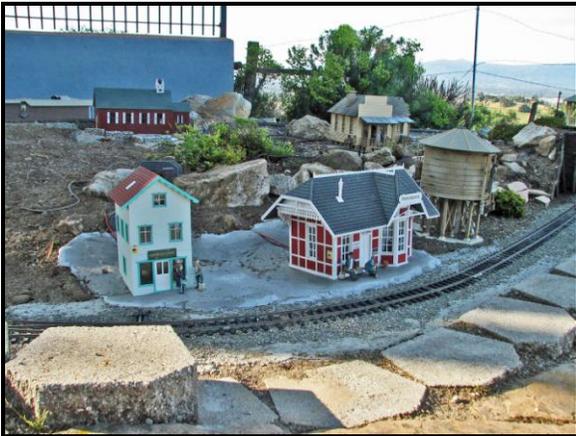
New Trestle Installed on Railroad

I took up the tracks in Providence yard, put concrete underneath (protection from gophers and moles), and re-graded it all. Providence yard got two new storage tracks. The yard has an arrival track, a departure track, and a run-around track so the storage tracks are an important place to keep cars that aren't needed to build the next train on the departure track. There are also two spurs leading to train storage buildings that can be used temporarily for car storage and shuffling. So Providence yard is now the primary yard for train activities.



Two Storage Tracks Added to Providence Yard

The station and general store at Providence were some of the earliest buildings on the railroad and were made of wood. Fifteen years was a good life for them so I replaced them with similar Piko models. A larger school was installed to meet the growing population.

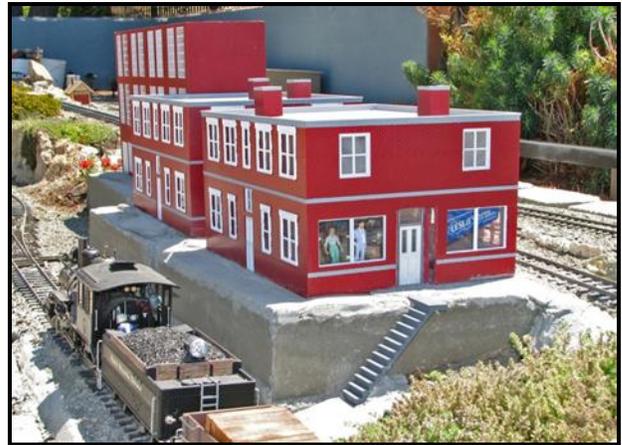


Providence

I took out a Crepe Myrtle that had gotten too big, required frequent pruning, and kept dropping debris on the tracks. It had served as a view block separating tracks that - well - should be separated. In its place I put in *Global Wizard Manufacturing*. ("G-Wiz" for short) - a large industrial building 5 ½ ft. long - with LED lighting. This was kit-bashed from 3 Colorado Models buildings.



Global Wizard Manufacturing Building



G-Wiz Mfg. - Note People and Sign in Windows



G-Wiz Mfg. After Dark

The Outaluck western-themed area got a new campground.



Campground Added to a Hilltop

Completely new is the Sawdust sawmill complex which also includes the relocation of the ACME Manufacturing building that I scratch built a couple of years ago. My objective for this area was to create some challenging switching operations (and use the four extra turnouts I had left over from other changes). After some trial and error, I was able to include a long spur to hold several arriving log cars from the logging camp. I added a runaround siding, one leg of which serves as outbound track for the sawmill. Finally, I made the spur serving ACME “trailing point”, i.e. an engine has to pull cars down the runaround track, past the switch, and back them into ACME. This will present some challenges in switching cars in and out of this area.



Mystic Mountain Engine #5 Dropping a String of Log Cars at Sawdust Mill



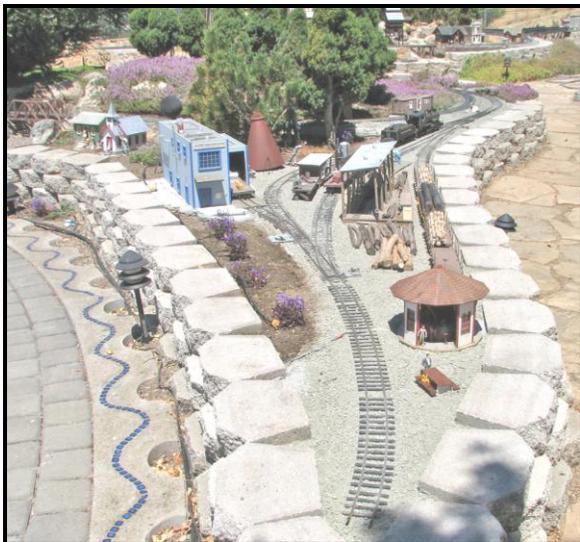
New Home for ACME Manufacturing



New Sawmill Area



Water Tank and Steam Boiler for Sawdust Mill



Sawdust from the Other End

The Red River area required the most re-grading - it had sunk up to 4" from gopher tunnels and settling.

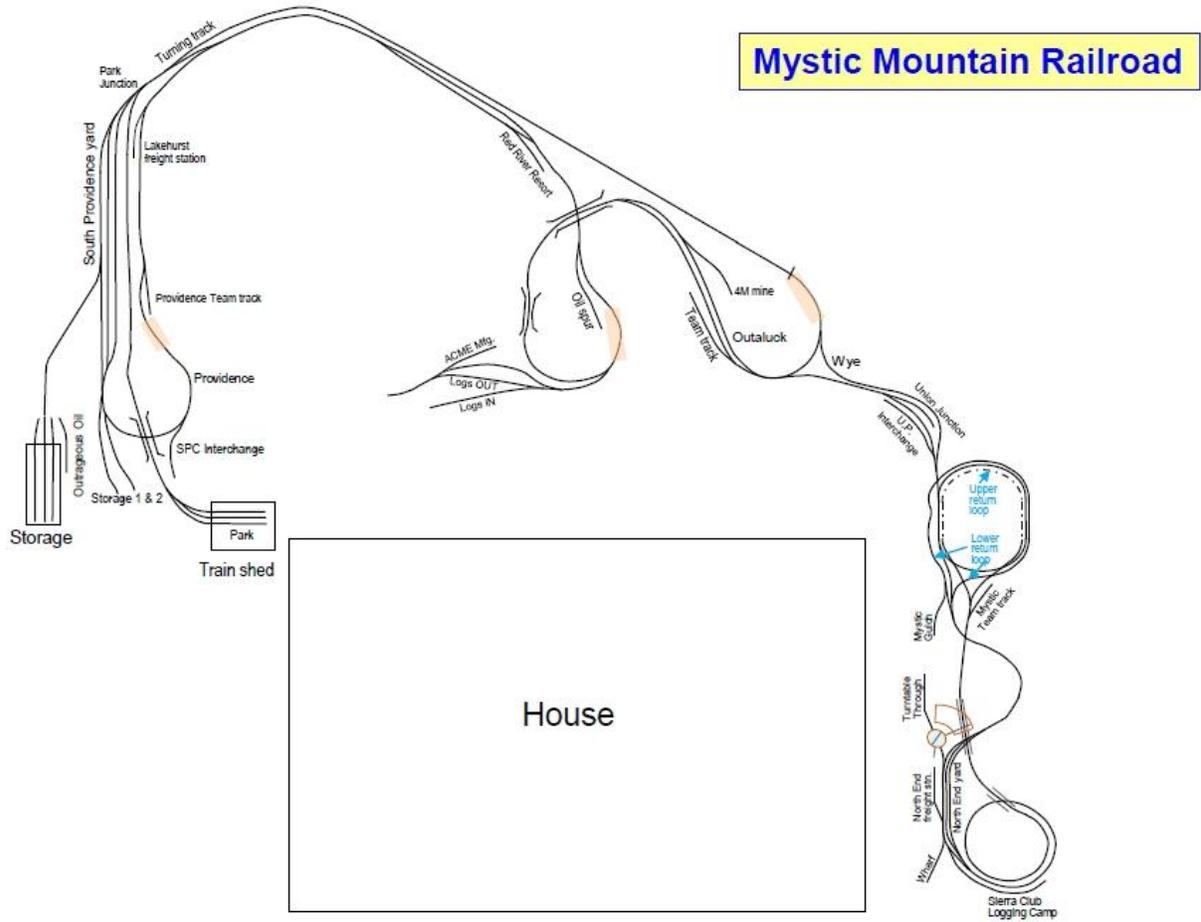


Extreme Settling - the Red River Area was Elevated 4" to Re-Grade Track to Level

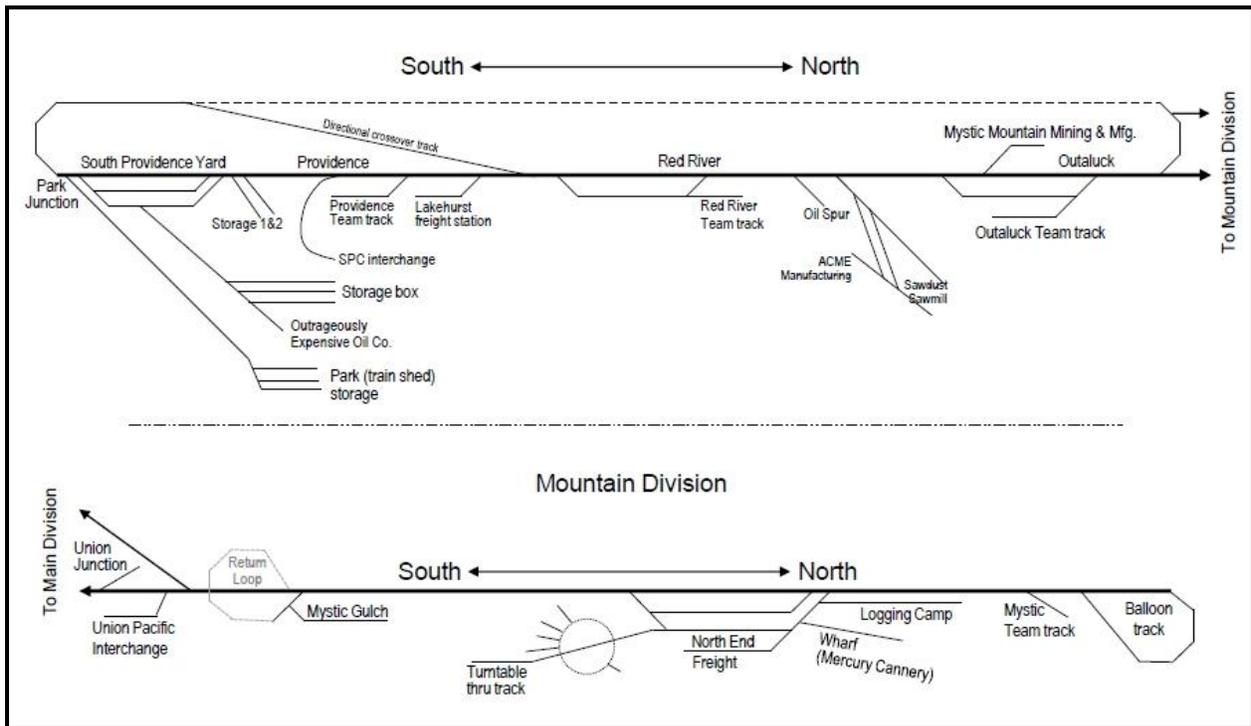
The last of the major renovations was the four-way frog-less turnout for the storage box. This was completely rebuilt to improve reliability of operation.



Four-Way Frogless Turnout for Train Storage Box



Track Plan with Locations



Schematic Representation of Railroad