



Mystic Mountain Railroad

The **Mystic Mountain Railroad** is a back country shortline loosely set in the early 1900's. The MMRR has two yards, 22 spurs, two wyes for turning trains, several passing sidings, a helix inside a mountain, and many tunnels and bridges. The Mountain Division runs over rugged mountains and deep canyons, necessitating several steel bridges. The MMRR interchanges with the Santa Fe, UP, and SPC RRs. Trains can be run point-to-point between the two yards for realistic operating sessions. For continuous, unattended running, two trains can be run in a large loop and an independent loop-to-loop run. Trains are battery-powered radio controlled.

A unique feature is the use of concrete rock wall castings painted with acrylics. Another unique feature is a 4-way pointless/frogless turnout for access to train storage. And numerous custom structures provide "business" for the railroad. A panoramic view of Silicon Valley serves as a natural "backdrop" to the railroad. Several sound effects units are installed around the layout. The railroad is lit for nighttime operation.

Track

The MMRR has about 1200' of Llagas Creek code 250 Nickel Silver track resting mostly on granite fines. I say "mostly" because gopher activity forced me to re-lay much of the track with a 1-2" concrete base. The minimum radius is 5'. Mainline grade is 2.7% or less; the grade up to the train room is about 3.5%. The Mountain Division has a helper grade of 4%.

Three long passing sidings allow for same-direction passing or reverse-direction meets. An extra siding and two spurs near Providence provide storage for trains/cars as well as classification of trains. The yard in the Mountain Division has dual passing sidings. A turntable allows turning engines for point-to-point operation with Providence. Many spurs provide opportunity for freight movement operations for various industries. The railroad is usually configured as two sections for continuous running during open houses. Trains can also be run point-to-point for operations using the crossover track near Providence, the wye just over the bridges from Outaluck, the turntable in the Mountain Division, and the balloon track at Mystic for turning engines or trains.

Control

I operate battery-powered, radio controlled trains using Aristocraft Train Engineer and Revolution. Batteries are Li-Ion or Makita 9.6V tool batteries and can be swapped quickly and recharged in an hour. The batteries are good for 1.5 - 4 hours. Trains all have sound systems (SoundTraxx and MyLocoSound). Some of the sound effects - and the switches for the return loops - are automated with magnets on every engine.

Structures

Structures are a mix of kits, kit-bashed, and scratch-built. Custom-built structures include:

- the roundhouse, turntable, station, and coal/water tower at North End yard,
- the ore processing at Outaluck, plant (120 lb. cast concrete)
- the ACME Manufacturing factory (Acrylic),
- the wharf and Mercury Canning Co. at North End (Acrylic, PVC, and old political signs),
- the Sawmill complex (Acrylic, metal, more recycled political signs).

I enjoy adding details and kit bashing commercial structures. Notice the workers repairing the water tower at Providence, the track crew completing a spur at Red River, and the combination water and coal tower made from an old tender at North End. The building "halves" at Union Junction are kit-bashed from Colorado Models kits. The same is true for the Global Wizards 5 1/2' long factory near Providence, which also serves as a view block.

The buildings are all lit for night time operation using LEDs and Christmas tree lights. Some bridges are commercial and some I've built myself, notably the custom, curved lift bridges connecting to the mountain division at Union Junction. Mystic Mountain is a story – and a twelve-month construction project - in itself. It houses a 1 ½ turn helix and two return loops.

Construction

The Mystic Mountain Railroad was started in December 1999, 18 months after we bought this house. When we moved in, this yard was just flat, bare dirt. We spent from 12/98 to 12/99 planning, putting in electrical and plumbing lines, building the raised planters, labyrinth, walkways, lighting, waterfall, creek, and pond. It took nearly 100 yards of material to fill the raised planters. The wall consists of 1800 stacking blocks with RR ties in the back. The labyrinth is 7,000 hand-laid pavers. All the plants are “drip” watered. We did everything ourselves, except the concrete and flagstone walkways. It took about a year to complete the track in the first phase with some plantings and structures. Later, plants and structures and more spurs were added. The train room was added in a kitchen remodel in the summer of 2001. In 2003-2004 the Mountain Division was created nearly doubling the amount of track. The Mountain Division originally included a complex four-turn helix to gain the needed elevation to create a scene with deep canyons and high bridges. The cast concrete rockwork for the Mountain Division took over 12 months in itself.

The waterfall, creek, and pond are lined with a thick rubber liner to prevent water loss, but the pond was attracting “unsavory characters” - Raccoons and other varmints. In 2014 it was converted to “pondless” to avoid this and also cut down on maintenance.

2014 Track Changes

During the major renovation in 2014, I simplified the helix greatly making the Mountain Division a loop-to-loop for continuous running. Inside Mystic Mountain is now a 1 ½ turn helix to connect the Mountain division with the rest of the railroad, and return loops at the top (Mystic) and bottom (Mystic Gulch). The switches for the return loops are automated with magnets on every engine to change train directions.

I also added a team track at Mystic and a spur for the Sierra Club Logging Camp at North End yard. Because of the helix simplification, I was able to change the wye at the bottom of the mountain, adding a spur for more switching operations. Two storage tracks were added at South Providence yard. And the entire Sawdust sawmill complex area was added to the railroad. I created a track layout in this area specifically to add complexity to switching operations here.

Points of Interest

The rock cliffs are cast in rubber molds or aluminum foil molds using white concrete. The rocks are then painted with many washes of acrylic (artist) paints. Some have been in the sun over 10 years; some fading is evident. Some additional washes were added in 2016 to darken the rockwork.

The track crew is finishing up installation of a spur at Red River Resort which will be used for freight to and from the resort. The recent addition of the Sawdust sawmill complex and ACME manufacturing plant (“*Everything for the wily coyote*”) was done to create a site for complex operations.

I have sound effects in several of the buildings including a bluegrass band in the Providence gazebo, telegrapher at Outaluck station, machine shop, sawmill, water and fog horn sounds at the wharf, and a piano player in the Mystic Gentlemen's Club.

Plants

- Groundcovers: Woolly and Elfin Thymes, Baby Tears, Green Carpet, Bolax Glebaria, Veronica, Sedum, Heather, Blue-eyed grass, mini Daffodils

- Trees: Seiju Elm, Hokkaido Elm, Mugo Pine, dwarf Alberta Spruce, Cryptomeria, Chamaecyparis, Tamarix Pentandra, Boxwood, Cuphea, Cotoneaster, dwarf Pagoda Holly

Problems Solved and Not-Yet-Solved

The black-tailed or mule deer up here are plentiful, voracious, and not much afraid of us. They were eating some of my RR plantings but also damaging buildings, bridges, and track from standing on it and walking through the RR. I installed six motion-sensing sprinklers around the yard many years ago. They kept the deer mostly out of the yard for about 10 years -- then they didn't. Deer trampled structures and track to the point that either I had to keep them out or move the railroad. I installed a 7.5' deer fence to keep them out in 2013 and then began a year-long process of repair, renovation, and some significant track plan changes.

Gophers, moles, and ground squirrels: I tried gopher bombs, road flares, poison, sonic thumpers, mole traps, mole spray, and professional service. I think the Euphorbia (aka "Gopher plant") I'm surrounding the yard with is going to help, once completely established. Putting 1-2" of concrete under the track at least keeps gophers from ruining the track. Raccoons, skunks and other critters trample things and digging is still a problem.

Other Items of Interest

The Wisteria provides passive solar heating and cooling to the house. In the winter it is dormant and leafless letting the sun into the house for warmth. In the summer it blocks the sun from the house while providing a beautiful view from inside via holes cut here and there. The 5 KW PV system pays about 80% of the electricity bill each year. The observatory came with the house but there was too much city light for serious astronomy so the telescopes were sold a few years ago to someone who could give them a good home in a more suitable setting. The Labyrinth is a copy of the one in the cathedral at Chartres, France. The weaving workshop in the "tennis court" orchard is my wife's project - made of Cob - a mixture of mud, sand, and straw.

<http://www.mysticmountainarts.com /MMRR>

