Garden Trains
From A to Z

R is for Raised Roadbed

Better Information - Better Railroad

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Garden Trains - A to Z

What you will find in this document.

Discussion groups are a great way to share information. One thing that is unique to LSOL.com is our Tuesday Topic. Each week, for almost six years, we have discussed a specific group topic. It could be about bridges, or maybe you like steam vs. diesel engines. Many times it is about how people solved a problem, or what they think about a current issue or product. My favorite was several years ago. "If your railroad was a candy bar, what would it be." (Good and Plenty, Milk Dud, etc.) We have fun at LSOL.com as well as help each other with serious issues on our railroads.

Now with almost 300 different weekly discussions online we wanted to make it easier for you to use this vast knowledge base of topics. We are taking the time to edit the best answers on a specific Tuesday topic into PDF documents. We have also added photos as available so you can see just what was being talked about from each of the users.

This paper is different than one written by just one author on a topic. You are getting dozens and dozens of years of combined experience from some of the smartest people running Large Scale Trains today. Save this document and start building your own personal reference library on your computer today.

What is LSOL.com? (Large Scale Online)

Large Scale Online has been providing information for Large Scale Garden Train enthusiasts for almost 15 years. We are the oldest, largest, and most professional web site on the Internet that is exclusive to Large Scale Garden Trains.

LSOL.com provides information in many different ways. We have online articles, videos for you to watch and photos for you to see how it is done. We also have organized and secure online discussion groups. We are the only site that requires people to use their real name. No hiding behind your keyboard making anonymous posts. Join Us.

This document is intended for members of LSOL.com. If you have received this document and are not a member of LSOL.com we ask that you please delete it, or come to our site and use the code AtoZ to join and get a discount on your membership subscription. You will be able to access even more information like this.

Raised Roadbed

Do you have an area on your layout that is higher for ease of use?

When we did our first Large Scale Garden Railroad we placed it flat on the ground. Of course, that was 15 years ago and my knees worked a lot better back then. When we moved to a new home three years ago I knew that my new railroad would have a part of it that was a few feet higher.

This way I could put engines and rolling stock on the track without having to get all the way down to the ground. Well… Get down was easy, getting up was the hard part.

So, what have you done? Do you have an area on your layout that is higher for ease of use in placing cars on the track? Is this something that was planned, added in later? If you did are you glad you did? If you did not, do you wish you had, or might you have plans to add this to your layout?

If you did, how did you get the track up off the ground? If so how high is it? Have you had any problems with this part of the railroad?

Todd Brody - We have a raised area across the centerline

We have a raised area across the centerline of the railroad as a visual block. It is not for putting trains on the track as it is harder to access these areas than the ground-level track.

Kenneth Allen - I built my railroad which have raised places

I built my railroad which have raised places but that was to get a level railroad with grades where I wanted them. I have a storage which I just back my trains in and ready to go when I want to run to run them. I have a re-railer when I want to add more cars to the train. This sure makes running the trains a lot easier. I sure do not want a complete ground level railroad for I cannot get up and down now.

Rick Henderson - my entire layout is elevated

One reason I no longer do outdoor G-gauge is because of my knees. In 1990 I was with a club that was installing a ground level layout and I learned quickly that my knees did not appreciate it. When I did my home layout, it was in a garage on tables. So my entire layout is elevated, and indoors.

However, I did have a temporary layout 96-97 outdoors and it was all elevated.

Greg Elmassian - Half is

Half is, but not necessarily for easier access.

But I found that when making up a 45 car freight, I roll one of my cabinets up to the track and it IS a lot easier to put stock on the rails.

Bill Ness - indoors and is all raised

My railroad is indoors and is all raised. It is on two levels, not connected, and the lower level is only raised about 12 inches because I wanted an easy step-over to get to the furnace and water heater, even though I would like it to be higher. Also, this lower level was laid out for a Big Boy which is heavy (46 pounds) and a higher track would have needed stronger support for stability. The upper level ranges from 40 to 48 inches with 2 percent grades. Mainly this is to give a viewing perspective from my control chair, but also easier wiring (old school DC track power), easier maintenance, ease of putting cars on the track, and storage underneath.

I answered that I am going to add a raised section, but this will be an extension of the upper level, not something added to get a raised area of an otherwise ground-level layout.

James O'Connor - 110 ft of elevated track all on trestles

The C&S Ry (Va. Div) has about 110 ft of elevated track all on trestles due to the steep slopping back yard. The remaining 140 ft is on flat ground.
We didn't plan on having that much elevated, but we didn't have a lot of choices. If we had to do it all over again on a flat yard, it would be with built up 2-3' retain walls and easy access to the track.

Here are a few shots of the elevated. These shots are several years old and the ground cover has really taken hold, making access to the track a real pain.

Dave Marecek - designed as a raised railroad

The Lone Firr RR was designed as a raised railroad as part of our lot development and it fits into the remaining space in the yard once the house was complete.

Because we are on the Wet Coast(Rainforest) , raised beds for track was mandatory to ensure drainage all year round including Dec and Jan torrential rains. Also since this was multiyear project, the beds were build in the shape of an E so that each year of addition was on a new section of raised bedding. The layout is raised 2' which is about 5 Garden Ties high. Average width of each section is 8' so trains can be reached 80% of the time from the ground without climbing onto tracks.

Noel Widdifield - indoor & outdoor railroad that is raised.

I have an indoor railroad that is, of course, all raised. I also have an outdoor railroad that is raised. I raised it when I built it so I could work on it without having to bend over to work. It is about two feet above the ground and I can work on it by simply kneeling on a soft pad.

Several of my friends built their railroads on the ground and complained about how hard they were to work on, so I raised mine when I built it. I am very glad I did. The older I get the harder it is to bend over to work on things.

David Maynard – Part is raised 14-18 inches high

My yard slopes up from the back of the back porch to the property line, so to build my railroad I had to cut into the one slope, and build up 2 sections. Part of the section by the side of porch is on a trestle about 14-18 inches high. This was what the surveyor (me) had to do to fit the railroad into the landscape. It works out pretty good, to put trains on the track I sit on a milk crate and just set the cars and locos onto the trestle. If I were to rebuild my railroad the trestle would not be a curved trestle and it would be a little higher off the ground. So the raised portion where I put the trains on the track was a happy but unplanned occurrence. This was a late winter shot shortly after the railroad was built. The trestle has since been replaced.

Chris Haon - retaining wall…3 1/2 feet

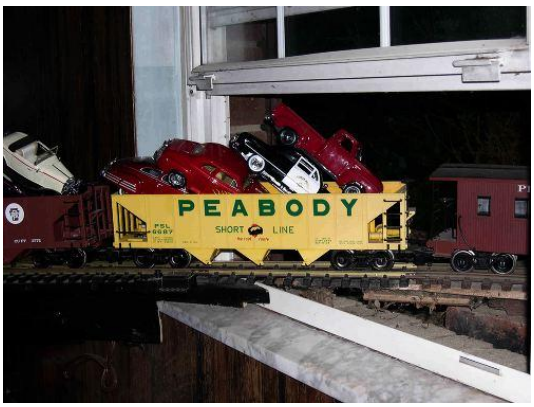
On my garden railroad I built a retaining wall next to the driveway that brings that area up to 3 1/2 feet which is level with the rest of the yard. This area is perfect to put the trains on and take off. I visited several GRR's and I heard horror stories about kneeling down and with me having had 5 knee surgeries I knew I had to do something!!! So thank goodness I had the foresight to build the wall. I must admit it adds a lot of extra space to the railroad and I am glad I did it!! My wife loves it too because of the extra space it gives her to plant more flowers!!!

Stephen Auslender - modules..55 inches long..30 inches high

I am currently constructing the modules upon which my railroad will run. There will be 30 of them 55 inches long and a minimum of 28 inches wide. Each of these "tables" will be connected end to end with the others to make a long dog bone. Some of them will be connected by bridges of various types. I want to make up long drags with double and triple headed steam engines with pushers in the rear. I will try to have the overall length to be a minimum of 60 feet end to end. The back of my property is wooded and the trains will make a more or less straight run with a 20 foot diameter loop at each end. I have no use for cutesy little engines. I prefer mallets and other big steamers. The tables are about 30 inches high because there is no way at my age and physical condition am I going to crawl around on the ground. Garden Shmarden, give me Astroturf!

Glenn Habrial - "raised" is not really raised.

I had a hard time answering the question. Partly because my area that is "raised" is not really raised. But the area that is 3 feet above the walking surface is LEVEL with the outside garden. And it is inside as a storage track. Fortunately I have added a 2 percent grade to clear another track and that is raised.



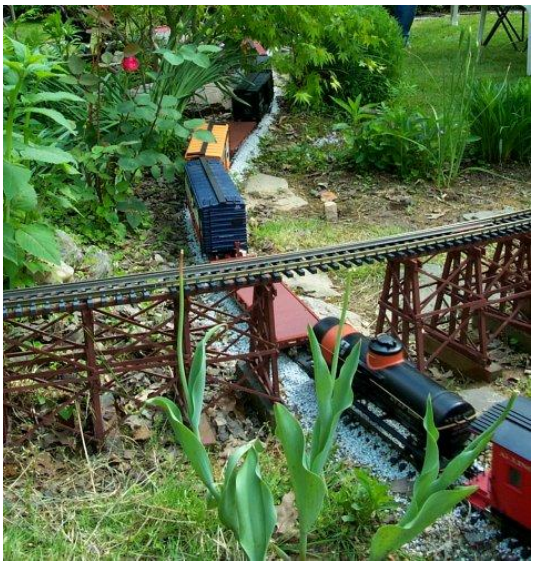
Ray Turner - mostly raised 15-24" off the ground

The Mystic Mountain RR is mostly raised 15-24" off the ground. One section ended up at ground level due to the grade of the lot. Unfortunately, this area is where the trains are stored too so kneeling down is still necessary for servicing/repair.

A big mistake was not compacting the ground I filled the raised planter with before laying track. For 3-4 years the ground sank each year and I had to add more dirt/ballast/xxx and re-grade the track.

Geoffrey Cullison - basement which will be about chest-high

I have a "raised area" but it is a trestle deep in the garden and was not designed or ever intended as a rolling stock loading place. I will shortly have setup tracks in the basement which will be about chest-high that will allow me to set up trains standing up before I run them out through an access tunnel onto the layout.



Bennie Shields - My railroad required an elevated portion

My original railroad required an elevated portion of track due to a large grade change from one end of the oval to the other end. I accomplished the grade change by building a 30 foot long, 15 inch high curved trestle on the low end of the layout.

Later I added a second loop, raised above the original loop. This required building the second loop about 15 inches higher than the lower loop.

These elevated portions were not intended to ease the loading of trains on the track, but loading on the trestle certainly helps prevent sore back and knees.

Paul Deis - raised 12"- 36

Our railroad is outdoors and raised 12"- 36" above the walkways. There are several spurs and passing sidings where it is easy to place rolling stock on the railroad.

Bill Upton - East end it will be about 30" off the ground.

The "K & B RR" is currently under construction. My yard is a gradual slope from West downhill to the East. I am building the first mainline as a level circuit, so at the East end it will be about 30" off the ground. Long range plan is to carry that back to my garden shed where I can store the trains when they are not in use. The trick will be to get them at a comfortable height there for easy of working.

Walter C. Bringsauf - raised about 36 to 40 inches

My entire railroad is raised about 36 to 40 inches off the ground. I drove 1 1/4 inch pipe into the ground and put 1 inch pipe with a floor flange on top to fit inside into that pipe so I could adjust the level. Roadbed is treated 2x6 with roll roofing strips used as ballast. The 4 track yard is a sheet of treated plywood covered with roll roofing. All wiring and controls are under the roadbed and out of the weather. It has been up for about 4 years and runs trouble free. I built a track-cleaning car that I use once in awhile to clean the dirt and corrosion off the sectional brass rail. I would do the same thing again since it sure beats getting down to ground level. The knees don't work too well anymore.

John Caughey - Mine's on the ground

Mine's on the ground and the track is held by ballast. I'm only 59 yrs young, I figure when I get old, I can always raise it, but I'd rather keep my knees flexible by using them. I only transport my 2 engines, the rolling stock stays out on the track 24/7.
A loco/train barn is in the plans for critter security. I do have trestle and bridges, but they weren't ever considered as retraining areas.

Robert Kubasko - may raise the island 1 or 2 more layers

Would you believe I had taken up the on-the-ground because the neighbor's tree had grown up and was dropping the horrendous helicopter seed pods and lo-&-behold - this summer they cut the tree down!

Have been buying railroad locomotives and cars, so now may raise the island 1 or 2 more layers of block and prepare for along the fence top as well.

David Clapper - part of the outside track will be elevated

I will have a layout similar to Glen Habrial's in that the raised portion will be in my basement with a removable track section for passage to a ground level layout outside. The lot slopes away from the back or the house so part of the outside track will be elevated on trestles or fill.

I have to thank Glen for posting the picture of the train going out of his basement window. I was able to show Ann just what I had in mind and she's quite excited about it.

I'm looking forward to being able to run trains inside this winter. I plan to build a loop around the table with a storage yard in the center. I can have a switching layout as well as a staging area for my trains.

Elaine Haggenbottom - ALWAYS on a raised or terraced bed

Fortunately for me, mine was ALWAYS on a raised or terraced bed, and even at that, there were times that I had to get on my all "4's"to reach certain items. (I quickly discovered my Knees didn't care for that either) That's when I invested in a "re-railer" and decided to put all buildings on bases and treat the entire scenes as vignettes. That way I could build them INSIDE in air-conditioned splendor on a normal sized craft table, glue everything down (or tacky) and merely place them on the ground where I desired...Foresight is generally the way to go with garden railroads, especially IF we are feeling our age. We all enjoy non-flat scenarios anyway.

Barbara Karkutt - three places... to put together a consist

I have three places where I can put together a consist while standing and one place where I can sit comfortably (which is where I do it mostly). The other three are the trestle, the area behind my town and the horseshoe.

The horseshoe was needed to bring down the grade going up the mountain...the trestle was necessary to cross a gorge in the landscape and the area behind the town was already a raised garden with a stone wall which retained the earth (now the ballast). They were all a part of the plan for the overall design and to give me areas where I could add cars easily.

John Blakeley - a 2 meter fall… thus a tall bridge & mountain

We are new-ish to the hobby and jumped in with both feet and built a layout on the ground but our small CBD backyard has a 2 meter fall so our double loop of 44 meters requires ingenuity... thus a tall bridge - 5 metres long and 2 metres high, an artificial mountain and the rest on the ground. We have scrapped a trestle (pity) to install a waist high switch yard to enable easy loading of trains - especially live steam. We know what you mean about knees.

Phill Lowe - wish I had raised the lower level

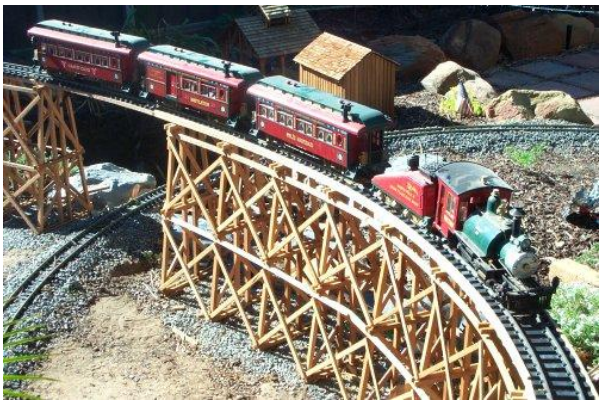
The Longwood Mountain Scenic Railway has an upper level just because I wanted a mountain. I envy those folks with terrain. It was planned for looks rather than ease of operation. NOW I wish I had raised the lower level, not because I mind getting on my knees, but because of constant track power problems. The upper level is always ready to go while ground level seems to require constant cleaning, adjusting, critters living in the tunnels and just plain trying to figure out what is going on now! Will make the move to battery power one of these days.

Rudolf Jager - Next go around…it will all be built up high

I made one of many mistakes as a newbie in 04/05 when I started the outdoor G-gauge hobby. Entirely on ground level and my knees and hips at age 65 are telling me now what a dumb idea that was. I use a rerailer at times and have even built in a knee pad on a flat stretch of track. Next go around believe me it will all be built up high enough to do what I have to do standing and also to get that great eye level view that I can only get now by laying in the dirt.

Dave Clarke - the third extension would be a raised track

I always had plans for adding a raised section to the railroad. The fact I found it too difficult to add a double mainline to the ground level track was the deciding factor. My garden also has two levels to it and I knew from early on that the third extension would be a raised track.



Dale Frels - all elevated in some way

My railroad is about 250 feet at this time with another 80 to 100 to add on maybe next year. It is all elevated in some way. Two reasons. #1 My yard is subject to flooding once or twice every 3 or 4 years. #2 It allows the use of the inside back wall of the garage to be used as a 16 foot long 4 track yard with turnouts to a tunnel leading out the back wall and 2% grade down to the mainline. I elevate with 1/2" conduit and fittings. Vertical conduit with a two screw coupler on the bottom and a box coupler on the top. Screw the coupler into the end of a 1/2" plumbing tee. Add an 8" piece of conduit into the side of the tee with a box coupler to hold up the roadbed. Drive a piece of 1/2" concrete rebar (24" longer than the conduit) down through the tee and the conduit into the ground. Tighten up the screw in the bottom coupler to adjust height. Use the threaded top of the pipe tee for more conduit or anything to make overhead night lighting possible. Put them about every 12 to 15 inches and stagger them from one side to the other. Use wood or other suitable roadbed and you're done. It is very fast to do and costs about $5 a foot for 24" to 30" elevations.

Joe Fotschky - raised part on my Garden Railway.

I have a raised part on my Garden Railway. The entire front is raised two railroad ties high. The reasons were more than just one. Yes it helps to have a raised area so you don't have to get on the ground to put trains on the track etc. The other reason was to differentiate it from the rest of the yard and I did not want it so that people could just easy wander on it without knowing. Kind of hard to lift your foot up that high and step up unknowingly.

Now that I run live steam too I am glad that it is raised.

MEMBERS ONLINE STORIES ON TRACK AND ROADBED

Here is a small sample of the articles that are online for members of LSOL.com

Dremel: How to Fix Broken Track.

We were going to need to cut out and replace a section of track and there were also some gaps in the track that needed to be touched up as well. Our problem was our old battery power Dremel tool had died.

Another type of 'Hardware Store' road bed.

I've read on LSOL.com about all kinds of road bed materials used on different railroads in varying parts of the world and thought I would offer up the system I came up with for my very low budget venture into G gauge railroading.

A Very Large Train Table

I wanted a way to run big, long, expensive trains outdoors at top speed, with minimum risk. I am not much of a gardener or a modeler, but I can design things. My layout satisfies my requirements and also uses some materials and techniques that you may find interesting.

EXCLUSIVE: A NEW ROADBED ALTERNATIVE

For several months I have experimented with this idea and have tried numerous ideas on cutting, joining, and drilling this plastic down spout and have reached a point where I can share my ideas with you. I do not think you will find an easier, faster, cheaper way to get your track on the ground, or up in the air using one product.

Modular Trestle Construction - Part 1

How many hobbies can you blame on your spouse? My wife is an avid gardener and she has toured many beautiful places including the Chicago Botanic Gardens.

Modular Trestle Construction - Part 2

Having visited a number of garden railroads, I heard some common refrains from several of those who had built trestles. One was keep the trestle out of water or wet soil, for the obvious reasons.