

# SL-and-N construction blog

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06-17-2020, 04:44 PM #706

**JatraVIA** Senior Member  
Join Date: Apr 2005  
Posts: 2902

Dave, looks like a nice space for your layout. I know there have been a few comments about the duckunder already ... sorry ... I would strongly suggest that you make that a lift out section of track. You will thank yourself later.

Joe

06-18-2020, 03:20 AM #707

**jbvb** Senior Member  
Join Date: Dec 2007  
Posts: 8212

James

06-18-2020, 07:31 AM #708

**railman28** Senior Member  
Join Date: Mar 2010  
Posts: 6713

remember how turnout kits use to come held together with thin metal strips? You spiked the turnout to the ties, then removed the strips.

Bob

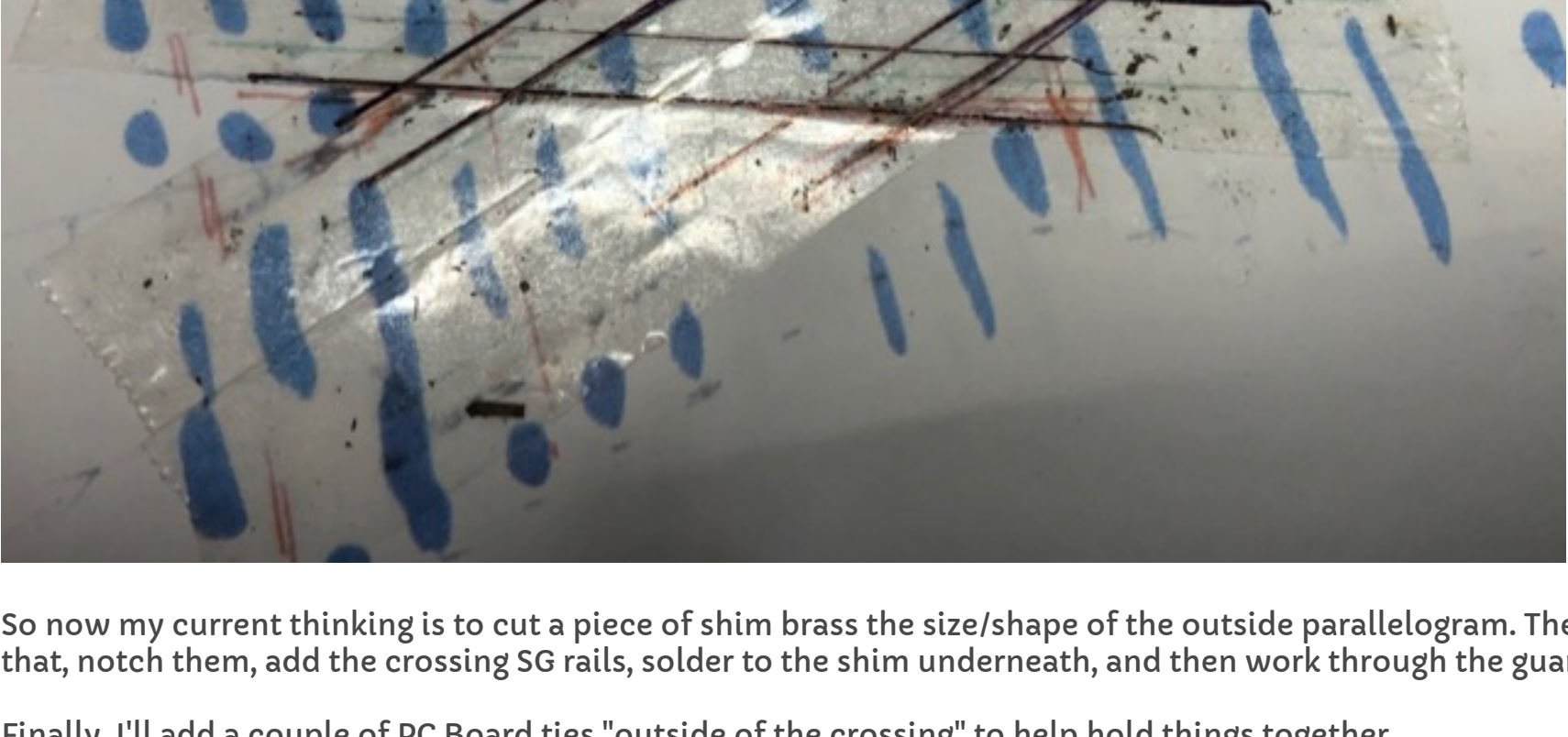
06-19-2020, 06:51 AM #709

**deemery** Senior Member  
Join Date: Sep 2007  
Posts: 11493

Some more cogitation on the crossing.

I stuck the rails for one direction down (I use a lot of double-sided "Scotch" tape for projects like this) and then added the guard rails. I marked along the outside of the 2-rail segment.

After doing this in both directions, I can see the interior parallelogram that represents the "see-through" of the center of the crossing.



So now my current thinking is to cut a piece of shim brass the size/shape of the outside parallelogram. Then I'll solder one set of rails (the NG running rails) to that, notch them, add the crossing SG rails, solder to the shim underneath, and then work through the guard rails.

Finally, I'll add a couple of PC Board ties "outside of the crossing" to help hold things together.

When all of that is assembled, I'll carefully cut out the center of the brass shim, and finally cut the gaps in the crossing. The net result should be sturdy. I'll work out the tie pattern underneath the rails, cut and stain the ties, glue them to the rails, and then move the whole 9 yards to the layout, cutting and fitting the rails into position.

dave

Modeling 1890s (because the voices in my head told me to)

06-19-2020, 10:14 AM #710

**jbvb** Senior Member  
Join Date: Dec 2007  
Posts: 8212

I'm not sure how well it will work to cut the gaps before all the rails being cut are securely spiked.

James

06-19-2020, 11:04 AM #711

**deemery** Senior Member  
Join Date: Sep 2007  
Posts: 11493

Well, I can get the whole thing assembled and checked out (standards gauge) and see how sturdy it is, and then decide between installing first or cutting first. :-)

dave

Modeling 1890s (because the voices in my head told me to)

06-19-2020, 01:09 PM #712

**JatraVIA** Senior Member  
Join Date: Apr 2005  
Posts: 2902

... first time I have written anything on the forum in forever ... and somehow I missed that there were 48 pages! Honest I only saw 2 pages the other night and I was referring to the electrical closest! Oy vey. I am going to have to look at the rest of the pages here now.

So odd.


Joe

06-19-2020, 02:36 PM #713

**deemery** Senior Member  
Join Date: Sep 2007  
Posts: 11493

Moving along with plan *whatever it is now...*


I added some long crossing ties to the Narrow Gauge rails and fit them into place.




I also cut the Standard Gauge rails to length.

Then I carefully marked where the SG rails cross the NG, using blue layout dye.

Next I drew the brass shim that will hold the crossing (stock rails and guard rails) together. I cut that out of the paper template and (transfer tape) glued it to .005 brass sheet.



Next I cut out the sheet, including the interior opening. I then put that into a bottle of acetone to remove the transfer tape and template. I fished that out of the bottle so you can see the final shape.



Tomorrow I'll fish that out, smooth out and file down the rough edges, and test fit the shim onto the bottom of the NG and the SG rails (separately). In thinking about this, I really want to notch the SG rails and keep the NG rails intact, so I'll need to redo the notchmarks. But that's OK, check twice, cut once, cus, and try again! :-)


dave

Modeling 1890s (because the voices in my head told me to)

06-20-2020, 01:55 PM #714

**deemery** Senior Member  
Join Date: Sep 2007  
Posts: 11493

Progress (I hope!)



Now I need to decide if I cut the gap in the NG rails, or start adding the SG center rails and guard rails.

dave

Modeling 1890s (because the voices in my head told me to)

06-20-2020, 03:20 PM #715

**BurleyJim** Senior Member  
Join Date: Jan 2014  
Posts: 7456

Will the SG rails aid you in guiding your cuts of the NG rails?

Jim

Take the red pill

06-20-2020, 02:31 PM #716

**deemery** Senior Member  
Join Date: Sep 2007  
Posts: 11493

Will the SG rails aid you in guiding your cuts of the NG rails?

Jim

Yeah, I used one of those RibbonRail gauges to help line up the two SG sides. First thing I'll do tomorrow is add another set of PC Board crossing ties and a pair of PC Board ties on the near SG tracks. (I screwed up the first set and had to recut those rails.) I also used the aluminum RibbonRail gauge to line up the base of the rails as I was soldering them (since solder won't stick to the Al RibbonRail.) I think the PC Board ties should be sufficiently strong to hold the entire structure together as I start to cut the gaps.

dave

Modeling 1890s (because the voices in my head told me to)

06-20-2020, 03:20 PM #717

**railman28** Senior Member  
Join Date: Mar 2010  
Posts: 6713

Let me know, give you some unsolicited advice. If you haven't already, give some thought on how you want to power this crossing and where you need to make isolation cuts. I am enjoying watching you build this.

Bo

06-20-2020, 04:46 PM #718

**deemery** Senior Member  
Join Date: Sep 2007  
Posts: 11493

Bob, it's actually a little more complicated for wiring, because the SG is DCC and the NG is DC. So this has to be fully electrically isolated. The short answer is apparently a PDT switch. The longer answer is that I want to combine the powering with a ball signal animation. Press the button, the whole crossing goes dead until the ball is into the next position. Then depending on the ball's end-state, either SG or NG is fully wired. I'm pretty sure I know how to do that. There'll be short isolation blocks between the main line and the crossing, too, which will either be "enabled for that direction" or "electrically dead".

The gaps are actually easy, it's the wiring that's tough. Each corner of the crossing is isolated and fed separately. See the FastTracks template: <https://www.hanladtrack.com/fts-ho-x-30>

But back to assembly: In thinking about this more while watching TV, I realized if I cut the gaps in the NG rails for the center of the crossing, there'll be nothing holding those rails in place. So that tells me the right thing to do is to add the SG inside stock rails and the guard rails, starting with soldering that brass shim to hold everything together. So cutting the NG rails will be the last step in assembly, I think...

This is easily the most complex thing I've worked on.

dave

Modeling 1890s (because the voices in my head told me to)

06-20-2020, 04:19 PM #719

**railman28** Senior Member  
Join Date: Mar 2010  
Posts: 6713

That sounds like a really neat scene Dave. Are using printed circuit board ties? They'll hold the rails in place.

Bob

06-20-2020, 04:22 PM #720

**jbvb** Senior Member  
Join Date: Dec 2007  
Posts: 8212

I'd be happy to contribute a 4PDT toggle from a set I bought at a train show years ago and doubt I'll ever use. You might also want to wire an 1156 (tail light) bulb in series with either the NG or SG feeder to let you know (and provide some protection) if operator error ever shorts the two power supplies together. I recommend they each have separate transformers (or fancier power supplies) fed from 110VAC.

James

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