

# Breaking Marley's Chains – On2 to S

*“Givens” don't fit? Change everything for a better layout*

by Trevor Marshall

Remember Jacob Marley? He's Ebenezer Scrooge's dead partner in *A Christmas Carol* by Charles Dickens. When Marley's ghost appears to Scrooge, he is chained to a collection of cash boxes, deeds, ledgers and purses. These chains represent Marley's earthly obsession with money.

Well, layouts can be like that, too. Hobbyists often find they're no longer having fun with a particular layout. Maybe their interests in the hobby have changed, and the scale, era, theme or another factor no longer appeals to them. Or perhaps they're having problems with something essential to realizing their layout's goals. This might be anything from trouble getting enough operators to run a session to reliability issues with key locomotives.

## Difficult to change

But these hobbyists have invested so much time and money into their layout that they're

reluctant to admit they're not enjoying it. To admit this, they feel, would be to admit failure. So, they continue to struggle with the hobby. They continue to try to work on a layout for which they no longer have enthusiasm.

Sometimes, they recover: They make a breakthrough and move on, once again enjoying the project. More often, I suspect, they simply continue to drift – not engaged by the hobby, but not out of it either.

This has happened to me. And it's not easy to accept. But I have learned that if I have not touched the layout in a full year, I never will. At that point, it can continue to occupy space and collect dust, or I can break “Marley's chains” and do something new.

In late 2011, after eight years of working on a freelanced layout strongly influenced by the two-foot gauge railroads in Maine, I've decided it's time to start again. The On2 Somerset & Piscataquis Counties Railroad is gone. In its place, I'm building a new layout – in a new scale and gauge, with a new theme.

## When I'm 1:64

I've decided to work in S scale this time out – a new scale for me. Here's how I landed in the 1:64 pool.

Before switching to On2 in 2003, all of my layout and model-building experience had been in HO. Scale choice is personal, of course. But for me, going larger was a great move. I discovered I enjoy building and detailing structures and scenes, and working in a larger scale is great for that.

I was disappointed, however, with the running qualities of On2. A friend has a beautiful On3 layout and he is a master at tuning locomotives. He did a tremendous job of improving the running qualities of my locomotives. But On2 modelers rely on older brass models and those models can be temperamental beasts. This is particularly true of that iconic piece of Maine two-foot gauge motive power, the Forney.

Also, quite frankly, working in On2 can be lonely. I suppose it would be different if I lived in Maine – but being a 12-hour highway drive

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***“ I have learned that if I have not touched the layout in a full year, I never will.”***

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Givens not working? Maybe they're actually 'Druthers.

Prospective layout builders have developed many approaches to layout design over the years, but regardless of the method they all start with Givens and Druthers. For those new to layout design, these were the terms popularized by layout planning legend John Armstrong for the things that can't easily be changed (the “Givens”), and the choices that we have more control over (the “Druthers” – from the colloquial “I'd ruther”).

One's layout room is a good example of a “Given”. In theory, even this Given can be made into a Druther: We can excavate a basement to increase the ceiling height, we can tunnel under the garage to make space for staging, we can hang the “for sale” sign on our current home and go hunting for a better layout room, and so on. But most of us have to play the hand we're dealt, real estate-wise.

Other considerations often written in on the Givens side of the ledger include scale, prototype influence, era and equipment already owned. And while these often work as Givens because they give us a focus to our planning, it's also unfortunate – from a planning perspective, anyway – that these choices are traditionally considered to be carved in stone. Sometimes, punting these Givens into the Druthers column reveals new possibilities for one's space or allows one to work through the layout-planning equivalent of Writer's Block.

Even those who are perfectly happy with the layout they've designed should give this a try: The results can be surprising. They surprised me. – TM

away, in Southern Ontario, means that few of my friends in the hobby have any knowledge of the prototypes. And even fewer have an interest in them as a modeling subject.

That 12-hour drive also contributed to my frustration factor. The more I learned about the Maine two-foot railroads, the more I wanted to explore the areas in which they ran. But the demands on my time have increased since 2003, when I switched my focus to modeling the Maine two-footers. Those demands have all been positive, but they mean that regular trips to Maine for prototype inspiration are out of the question.

It was pretty clear to me that continuing to work on my On2 layout would be an uphill battle. I decided I needed to explore other avenues.

### Scale versus gauge versus space

I love the size of O. Trains have heft. Details can be seen. And I enjoy building large models of small prototypes such as section houses and flag stop shelters. And unlike in On2, O scale standard gauge locomotives tend to be good runners. I decided to try designing some O scale layouts for my space.

However, my O scale plans for my space always left me unsatisfied. The problem is, my space is reasonably long, but very narrow. I was running into curve radius issues. I was also finding that, in O scale at least, my two primary objectives for a layout were in conflict.

### Goal 1: Realistic scenes

First, I wanted to create realistic scenes. That meant giving the scenes space to breathe, so they'd look like places one would find on a full size, standard gauge railroad as opposed to a miniature basement empire.

It also meant using larger turnouts than what one normally sees on model railways. My friend Mike Cougill uses #8s and #10s on his Indiana & Whitewater layout and I love the effect. (But judge it for yourself by visiting Mike's web site – [www.cougillstudios.com](http://www.cougillstudios.com) – and download his PDF on turnouts. You'll find the link in the lower left corner.)

### Goal 2: Operation (at least, a bit)

Second, I wanted some operation. Not a lot, but enough to keep a couple of people entertained for an hour or so.

What I found was that even a simple design became so compressed in O scale that it ended

up looking like a Time Saver. (Not literally, mind you: I use the term as an example of any compact switching puzzle – the very sort of thing that real railroads avoid.)

In addition, every plan required a huge balloon track involving almost 360 degrees of curvature (when one includes an adjacent yet necessary S-curve) to get trains from one side of my layout space to the other. Even so, this curve was going to have to be pretty tight – I would say, “train set tight”.

Every design ended up with two too-tight switching districts (or a too-tight terminal and a staging yard) and a whole lot of curved, awkward nothing in between. Try as I might, I just could not imagine hand-laying all that track for something I knew would end up being frustrating.

At some point, I realized that O scale standard gauge would not fit my space and give me what I wanted. So, what to do? Some friends suggested that I make some adjustments to my goals – for example, by trading in the small steam power for small diesels, which could negotiate a tighter curve and smaller turnouts. I decided on a different strategy.



*CNR 4-6-0 #1336 leaves Simcoe, Ontario, southbound for Port Rowan with the mixed train on August 4, 1956. The boxcar is carrying LCL (Less Than Carload freight) and there is no carload traffic in the mixed today. This train inspired the author to consider Port Rowan as a modeling subject in 1:64. (Robert Sandusky photo – used with permission)*

## The cabinet of wonders

Fortunately, I've always had an open mind in this regard, and I've acquired many interesting models in a variety of scales, gauges and prototypes. A cabinet in my home office displays everything from an Nn3 boxcar to 7/8" scale (1:13.7) live steam equipment.

One day while looking at my collection, it occurred to me that I should try working my way down through the scales/models in my cabinet. Perhaps I could design an appropriate layout – using something in my collection as a starting point – that would fit my basement, provide the opportunity to build realistic scenes, and give me the modest amount of operation I desired. O scale (1:48) didn't fit, but maybe its ¾ sized cousin, S scale, would? If not, I have plenty of HO in the display cabinet.

My S scale models are of Canadian National steam-era prototypes, for use on an exhibition layout built by the members of the S Scale Workshop (<http://sscaleworkshop.blogspot.com/>). This group has used a Free-mo inspired standard to create a highly flexible layout representing a CNR branchline in Southern Ontario in the 1950s. I'm an associate member of the group and while I've yet to build a module I have worked on another member's module. Along the way, I'd picked up some equipment to run on the Workshop layout, including a pair of CNR 4-6-0s and a CN caboose. I decided to explore whether I could find a suitable CNR prototype for an S scale layout – one that would fit my space and achieve my goals.

## Search for a prototype

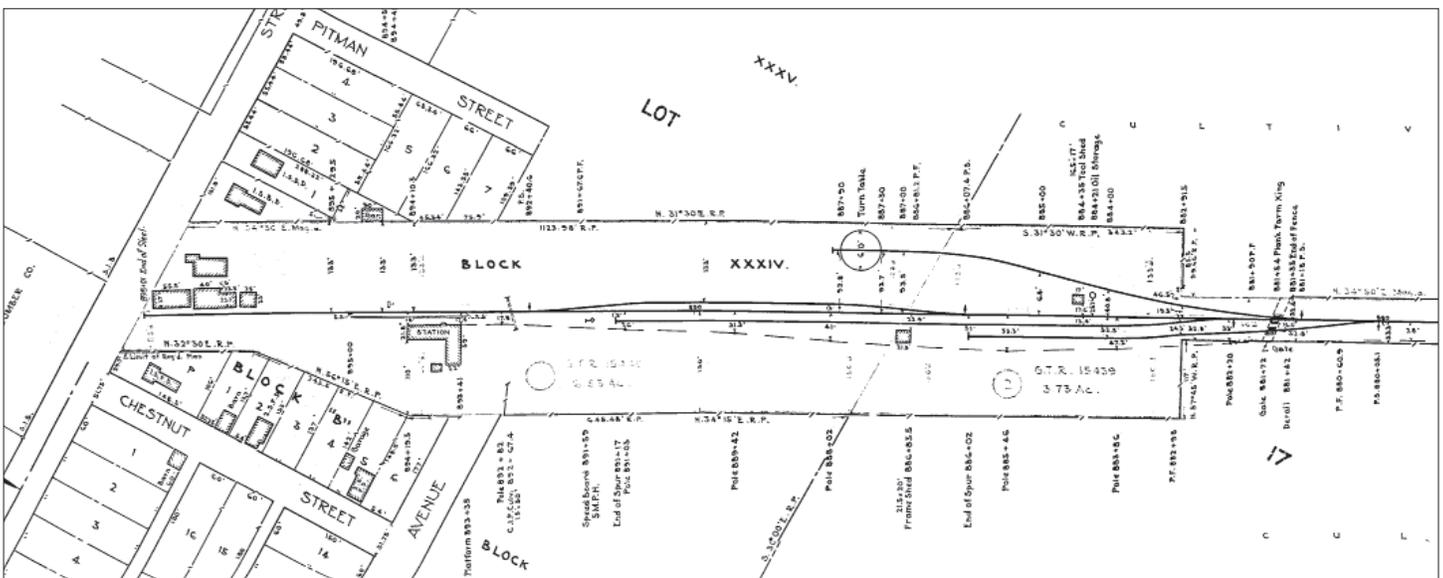
Fortunately, those interested in this style of railroading have a tremendous resource. Author Ian Wilson has penned a series of award-winning books on the Canadian National in Southern Ontario. Each focuses on a major terminal, describing the trains, the customers and the communities. The books include maps for each community served, showing the track arrangement, connecting lines, railroad structures, industrial customers, bridges – in short, everything one might need to get started on a layout.

My layout space is in a multi-purpose room in the basement and while it's not small, it is awkward, with various no-go zones for utilities and such. Having designed several layouts for the space – and even built a few of them – I know that a point-to-point arrangement works best in this room, which means I'm limited to the classic “terminal to fiddle yard/staging” operating scheme.

I therefore looked through Ian's books for branch line terminals. Quick sketches showed me that most were still too big for my space. But one terminal – in Ian's book on the lines radiating out of Hamilton – fit the bill perfectly.

## The essence of a terminal

Port Rowan is a small town on the north shore of Lake Erie. It has been decades since a train turned a wheel in the community but at one time, Port Rowan had a very compact branch line terminal.



This Canadian National Railway Survey Map of Port Rowan (author's collection) shows the relatively few tracks and simple structures of this end-of-the-line branch terminal – ideal for modeling in a larger scale within a medium-sized space.

With just five track switches, I'd hazard a guess that Port Rowan was the smallest such end-of-the-line on the Canadian National in Southern Ontario. But within that compact space, there's a team track, elevated coal delivery track, a feed mill, a station serving passengers, mail and express, a turntable, and some interesting ancillary structures such as a section house.

It's not dramatic, and the operating potential certainly won't make a crew break into a sweat. But there will be enough to do to keep a couple of people entertained for 45 minutes to an hour, before retiring to the pub – and I have several very good pubs nearby.

**What's the Lynn Valley doing there?**

Those familiar with the Canadian National's branch to Port Rowan will wonder why my layout plan includes a segment of the Lynn Valley, which was located on the CNR's adjacent branch to Port Dover. These two branches are very close together and join at Simcoe, Ontario, with the Port Dover branch running about 7.5 miles to the southeast, and the Port Rowan branch extending almost 17 miles to the southwest. Both end at Lake Erie, and both branches were served by the same mixed train.

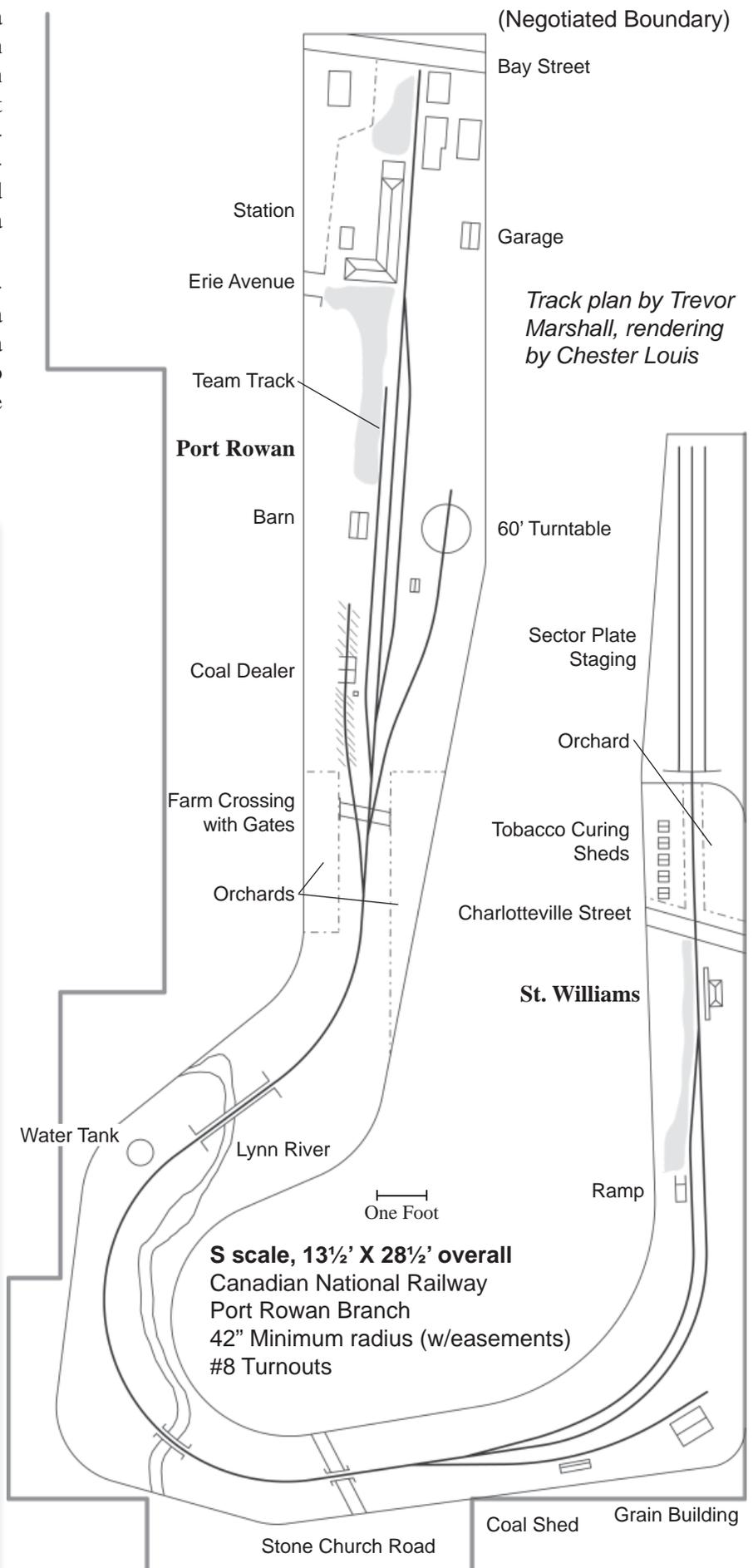
I decided to stray from the prototype for three reasons.

- The landscape around the Port Rowan branch is primarily farm fields and the line itself is fairly straight. But connecting St. Williams to Port Rowan required a fair bit of curved track. Moving the Lynn Valley slightly west to the Port Rowan branch will allow me to model some heavily forested area to help disguise the curve.

- The move also provides me the opportunity to model the Lynn Valley water tank, a pair of bridges, and the river itself. As Port Dover was served by the same mixed train that visited Port Rowan, my trains will look correct in this scene.

- There are no watering facilities on the Port Rowan branch itself, so adding this scene will enhance the operation on my layout as crews must stop to top up the tanks on their 10-Wheelers and Moguls.

In a similar vein, I've moved a small overpass at Stone Church Road in Rymal, Ontario several miles south because it will make an interesting photo location. – TM





*It's July 25, 1953 and CNR 2-6-0 #88 arrives at Port Rowan with the mixed train in tow. The train is on the main. To the right, barely visible in the grass, is the team track. The runaround track is to the left – similarly overgrown. The barn at right blocks the view of the elevated coal track. (Elmer Treloar photo, Keith Sirman Collection – used with permission)*

*The availability of key equipment in S scale made it possible to consider modeling the CNR at Port Rowan. This equipment includes CNR 4-6-0s, suitable starting points for AAR-style 40-foot boxcars and a CNR baggage-mail car (both shown here, finished) and cabooses. Not shown, but also to hand and waiting to be built, are a suitable CNR combine, CN Fowler patent boxcar, and a CNR 2-6-0. Equipment details in the sidebar, facing page. All model photos by the author.*



*Canadian National 10-wheeler #1541 heads for the turntable at Port Rowan on October 26, 1957. This is looking north at the entrance to the terminal. The structure at left is a section house while the track at right is the elevated spur for the coal dealer. With so few structures to build, careful attention will have to be paid to modeling the little details, such as the lever frame and the weed-choked sidings. (Robert Sandusky photo – used with permission)*



It took two attempts to create a plan that fit my space beautifully. Compared to my O scale attempts, the advantages were apparent:

- The 25% saved by downsizing to S scale would allow me to use the longer switches I desired and still give me plenty of space in my scenes for a realistic arrangement of structures.
- In addition, the plan I drew featured curves that were 15% tighter than the minimum I used in O scale. But again, the models are 25% smaller. This meant a relatively larger minimum radius, which addressed the “train set curve” issue.

- The space saved by switching to S would free up enough real estate to add a second on-line community. St. Williams is the next town up the line from Port Rowan. It’s simple – just a double-ended siding and a spur – but having an intermediate town between Port Rowan and my staging area would give operators a stronger sense of trains actually going somewhere.

So far so good, but two locomotives do not a layout make. I would need to determine whether I could find the information needed to pursue the project. I would also need to determine whether I could buy or build everything

### Equipment Needs for a New Scale and Prototype

It pays to research what’s available before committing to any new scale or prototype. One may find that key models simply are not available. Or one may find that an idea that at first seemed impractical is actually quite possible.

Such is the case with my Port Rowan project. S scale may seem an odd choice for modeling the CNR – except that the prototype is surprisingly well served by manufacturers. To illustrate, here is a list of what I determined I would need for the Port Rowan project, with notes on suppliers.

#### *Steam engines:*

Photos of Port Rowan in the 1950s show CNR 2-6-0s and 4-6-0s. Both have been produced by modeler Simon Parent and S Scale Loco and Supply. As already mentioned, I picked up a pair of the 10-Wheelers built and finished for me by Simon.

We chose CNR 1532 and CNR 1560 since Simon had good photos of both sides of both of these locomotives from which to work. They were also numbers not used on locomotives owned by other members of the S Scale Workshop, an important consideration on a DCC-powered exhibition layout.

Simon is a master craftsman and these locomotives are the nicest running steam engines, in any scale, that I have ever owned.

I recently acquired one of Simon’s kits for a CNR mogul, which I will have him build.

#### *Passenger equipment:*

My needs are modest here as the only passenger train to serve Port Rowan was the daily mixed train. In the early 1950s, the passenger equipment on this included a baggage-mail car and a combine. Later photos show the baggage-mail car replaced by a baggage car.

For the combine, Andrew Malette of MLW Services has come to the rescue with a very nice etched brass and resin kit. Meanwhile, S scale supplier American Models makes a decent ready-to-run RPO that is a good start for a CNR mail-baggage car.

There’s no suitable starting point for a CNR full baggage car, but if a kit does become available – and it might – then

I will add one to the roster. In the meantime, the lack of a baggage car doesn’t stop me from offering mixed train service.

#### *Freight equipment:*

Again, my needs are modest here. There’s not a whole lot of traffic in and out of Port Rowan. Photographs show hopper cars of coal and stone, boxcars of building supply materials delivered to the team track for a lumber yard, or cars for the feed mill located at the end of track. In addition, a train may include a boxcar of LCL or the occasional tank car of fuel oil.

Oliver and David Clubine at Ridgehill Scale Models offer nice resin kits for CNR (and CPR) Fowler Patent boxcars (as well as terrific resin kits for CNR cabooses in three variations).

To boost Canadian content, Andy at MLW Services is in the process of bringing CNR eight-hatch refrigerator cars to market as resin kits. Reading about the branch, several stations on the line shipped apples at one time – and given the relative paucity of Canadian equipment I’ll happily justify using an eight-hatch reefer or two, spotted at the Port Rowan team track or on the St. Williams siding, to represent this traffic. (As an aside, Port Rowan once had a large apple evaporating plant near the station, which supplied dried fruit for soldiers in the First World War).

To fill out the train, a selection of era-appropriate freight cars is available from American Models, S Helper Service and S Scale America. These are ready to run models that are very well detailed, although they may need modification to better represent specific prototypes. Between the three, I’m covered for boxcars, hoppers and tank cars – at least as starting points for any detailing projects I want to undertake.

At one time, a company called Pacific Rail Shops offered kits for several common boxcars, such as 1937 AAR cars. I have already built a few of these, and they remind me of the HO scale Front Range or McKen kits from years ago. In addition, Andy at MLW Services offers a set of detail parts to upgrade the PRS boxcars, while S Scale America’s line includes the very-Canadian eight-rung boxcar ladders with integrated stirrup steps. – TM



CNR 4-6-0 #1541 leads a mixed train unloading passengers at Port Rowan. The station is out of view to the right, while the feed mill is out of view to the left. This photo would have been taken in the late 1950s – probably 1957. The cinder driveway doubles as the platform. The building at left is a garage: the author has just enough room on his layout to include this structure. (Keith Sirman Collection – used with permission)



I need to create an S scale layout, based on the CNR's Port Rowan branch.

### Information

Living in Southern Ontario as I do, the Canadian National Railway is the home team.

It's not as extensive as it once was – not by a long shot – but one doesn't have to go very far to find the CNR. From a hobbyist's perspective, that also means it's arguably the best-researched prototype for modelers in this area.

Go to a local train show, and the photo vendors will have a good selection of CNR pictures on offer. Local historical societies have information about the railway because, well, it served their town. And Southern Ontario railfans and modelers have done a tremendous job of documenting the railway's various lines, equipment, structures and so on.

In addition to Ian Wilson's book, *Steam Echoes of Hamilton*, I can also draw on information in *Hamilton's Other Railway* by Charles Cooper.

Beyond books and photo dealers, I have several friends who model the Canadian National in the steam era (in a variety of scales) and they've been very generous in sharing what they know. That's a nice change because frankly, my work on Maine two-foot lines since 2003 often seemed like working in the wilderness. Neither of my two closest friends in the two-foot community lives in Southern

(Middle left) The author set up this train to make sure equipment would not have any issues with the vertical curves on the elevated track serving a coal dealer. A derail will be located on the spur about where the tender sits, while the CNJ hopper is spotted at the future location of the dump pit.



(Bottom left) Undertaking a relatively simple layout such as this allows the author to invest more time detailing his scenes. A case in point is this bridge, on which the running rails are spiked every tie. The guardrails are spiked every fourth tie or so. The bridge will receive more detail and weathering before it's installed permanently.

Ontario. One is in Western Canada and the other is in the United Kingdom.

After almost a decade of self-imposed exile, it's really nice to be working on something to which my local peers can relate. Already I'm benefitting from the knowledge of those modeling the line south of Hamilton to Port Dover and Port Rowan, as well as the expertise of those modeling the Canadian National in S scale (and in other scales, too).

### New enthusiasm

As can be seen in the accompanying photos, I've already started my S scale adventure. I've acquired enough appropriate equipment to ensure I can represent the CNR in Port Rowan – a modest yet interesting example of Canadian branch line railroading in the twilight of steam. If you care to follow along, I'm documenting my progress on a blog at:

<http://themodelrailwayshow.com/cn1950s>

I never thought modeling in S scale could happen to me, but the change has injected new enthusiasm into my enjoyment of the hobby. In addition, it has strengthened existing friendships in my local hobby circles, and even fostered new ones. I foresee many enjoyable (but brief) operating sessions followed by memorable evenings at the pub, talking trains and solving the world's problems. And really, isn't that what a hobby should be about? LDJ

*(Middle right) Looking up-line from Port Rowan. The boxcar at right is on the team track, while the elevated coal track is in the distance. The box to the left indicates the position of the turntable (although it will not project into the aisle). This will be added after the rails have been spiked down elsewhere. In the distance, the twin-span crossing of the Lynn River is above the hopper car, while across the aisle can be seen the road overpass just south of St. Williams. A 12-volt DC landscape lighting system lights the layout and will be hidden by a valance.*

*(Bottom right) 42"radius curves with easements and lots of room for non-dramatic scenery give the layout the relaxed feel essential for capturing rural southwestern Ontario railroading in the 1950s. The line in the foreground will run between orchards.*

### Tips ...

- If a layout sits neglected for over a year, it's time to think about whether that layout will ever be completed
- If layout design attempts repeatedly end in frustration, try designing in another scale
- It pays to think about one's non-hobby commitments and realistically assess one's available hobby time if one wants to plan an achievable layout
- If a scene from an adjacent branch fits, use it!

### ... and Trade-offs

- Switching scales, gauges or prototypes will involve some expense if one has to sell existing stock and purchase new equipment
- A favorite prototype or theme may not be well supported by manufacturers, especially in niche scales. Before committing to a new plan, it pays to assess what's needed to translate the design into a layout and then audit what's available from suppliers – *TM*



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