

O **RESOURCE**

THE

SCALE

NEWS, REVIEWS, INFORMATION TO USE
We're putting the "modeling" back
in Model Railroading! ®
Volume 11 No. 3
January/February 2024

10
CELEBRATING
YEARS

FORGE SHOP MACHINERY

MOUNTAIN ELECTRIC
FRUIT EXPRESS
ME RY
609

Canadian National Railways Sanmore Subdivision - End of the Line

Faster Way to Nail Down Resin Printing Exposure Times

O Scale History - B&O / Duke Energy Holiday Layout

Mountain Electric: Extension to Belle Vernon Part 1

New Tracks & My Build

and so much more...

THE

MODEL RAILROADS, SHIPS, PLANES

ALL-NATION HOBBY SHOP

Look what's coming down the tracks!

A BIG TRAIN LOAD OF O SCALE!

**SCHEDULED STOP: O Scale March Meet
March 14th - 17th, 2024 Lombard, IL**

➡ Online Catalog & Order Form ◀

Not on our site? Ask for it & we may have it!



Did you know we have...

Transmissions/Drives/Motors

- ➔ Helix Gear
- ➔ Chain Drive
- ➔ Drop in Ready
- ➔ Gears
- ➔ Rehab / Parts
- ➔ Mounting Brackets/Platforms
- ➔ Bash Kits & 3 to 2 Rail Kits

Click on Blue Text to go to that section of our Web site!

Check out the new section:
Cool Information!

SHOP NOW! Cars/Kits (including 10 Different Caboose Kits), Detail Kits, Hardware, Generic Parts, Scratch Build Parts, Decals & Heralds and so much more!

Visit us at www.AllNationLine.com Call: John Wubbel, 570-580-7406



Published Bi Monthly

The Model Railroad Resource LLC
407 East Chippewa Street
Dwight, Illinois 60420
815-584-1577

January/February 2024
Volume 11 No. 3

Owner / Publisher
Amy Dawdy

Managing Editor
Daniel Dawdy

Advertising Manager
Jeb Kriigel

Welcome to the online O Scale Resource magazine. The magazine is presented in an easy to use format. The blue bar above the magazine has commands for previewing all the pages, advancing the pages forward or back, searching to go to a specific page, enlarging pages, printing pages, enlarging the view to full screen, and downloading a copy to your computer.

Front Cover Photo

A beautiful scene from George Paxon's Mountain Electric trolley system.

BILL OF LADING

- [3 Bill Of Lading](#)
- [5 From the Publisher's Desk](#)
- [6 In Memoriam](#)
- [11 News You Can Use - New Items of Interest](#)
- [15 Canadian National Railways Sanmore Subdivision: the End of the Line!](#)
By Serge Lebel
- [21 Over-Thinking While Building the Extension to Belle Vernon Part 1](#)
By George Paxon
- [55 Resin Printing: Faster Way to Nail Down SLA Exposure Times](#)
By Dan Dawdy
- [65 Building a Severn Models Apex Roof Garden Shed](#)
By Jim Miller
- [74 New Tracks Modeling](#)
By Contributing Editor Jim Kellow MMR
- [106 New Tracks November 22nd, 2023 My Build](#)
- [113 O Scale... Old School Style Vintage O Scale 1926-54: B&O / Duke Energy Holiday Layout 1935 - 2023](#)
By Carey Williams
- [119 Backshop Solutions](#)
By Ross Dando
- [123 So, What Are You All Up To?](#)
- [128 Show Schedule](#)
- [129 Classified Ads](#)
- [130 Advertiser Index](#)



The Model Railroad Resource, LLC publishes *The O Scale Resource* and *The S Scale Resource*. Be sure to look at both of our magazines. There are many articles in our magazines that are not scale specific and will be of interest to you. Click the magazine title in this announcement to see the magazine.

20,000 sq ft Ballroom: 350+ Tables

MARCH-O-SCALE-MEET

March 14 - 17, 2024



BUY SELL TRADE!

Clinics, Discussion Groups,
Contest & Layout Tours



For more information, go to:

www.marchmeet.net

Westin Lombard Yorktown Center

70 Yorktown Center
Lombard IL, 60148

Call 1-888-627-9031

Ask for March-O-Scale Meet
Rate \$123/night*

*Wednesday thru Sunday Night

THURSDAY

Fox Valley O Scalers
Operating Session: 12 pm - 5 pm
Layout Tours

FRIDAY

Dealer Setup: 1 pm - 9 pm
Layout Tours
Evening Discussion Meetings

SATURDAY

Dealer Setup: 8 am - 9 am
★ Show: 9 am - 5 pm ★
Model Contest, Clinics
Layout Tours

SUNDAY

★ Show: 9 am - 2 pm ★
Layout Tours



The cost for admission is \$30 per person (spouses are free of charge), children 15 and under are also free.

This \$30 admission fee covers the entire weekend, from the meetings beginning Friday night until the close of the show Sunday afternoon, including all layout tours and clinics.

You can register in advance by clicking this ad and going to the registration form tab at the top of the page and printing off a form and mailing it in with your payment. This ensures that you will not have to wait in line at the show and will have a preprinted badge waiting at the show for you.

You can also purchase admission at the door at any time.

The registration form is the same for people who just wish to attend the show and vendors who wish to rent tables at the show.

From the Publisher's Desk

Wow, it's been a roller coaster year. Great shows, new products and untimely losses. Since our last issue, we have lost five great modelers and friends. We'll cover that information on the next page.

As most of you know, we are entering our 11th year of publishing *The O Scale Resource Magazine*. I know some who said it would never work... ya, you know who you are. But we are still here as the only bi-monthly Scale O magazine being published. We have come a long way, learned a lot, and will continue to bring you the latest news, new products and articles. But... we can't do that alone.

A month before we publish, an Email is sent out to over 300 manufacturers, distributors, small modeling businesses and more asking for any news or new products that we will publish "free" in our News section. Very few send in anything. Did I say "free"? I don't understand turning down a free push of your product or service to the O scale community, but it's your call. If you do want people to know who you are and what you have to offer, [drop me an email](#) and I'll add you to our list so you will receive a reminder a few weeks before we publish. And no, we won't start calling you and pushing advertising on you. We don't operate that way. Now of course you should absolutely be advertising with us to reach over 6500 readers each magazine*. [Check our rates here](#), and don't overlook the Classified ad. One year for \$200 linked to your Website or Email and can be changed throughout the year at no extra charge! If you want to reach the Scale O community on a regular basis, we are your most viable option.

We also would like to see your layouts, projects or whatever you are working on. Shoot us an Email with your ideas and we'll work together.

In this issue, Serge Lebel tells us about the "End of the Line" for the Canadian National Railways Sanmore Subdivision, kind of.

Also in this issue, The Back Shop with Ross Dando; George Paxon begins a two part article on Over-Thinking While Building the Extension to Belle Vernon; and Carey Williams shows us the history behind the B&O / Duke Energy Holiday Layout 1935 - 2023.

I continue to discuss Resin Printing with this month's article, Resin Printing, A Faster Way to Nail Down SLA Exposure Times. Also, as always, New Tracks and New Tracks Build Along, and a few winners of kits show their builds.

Of course News, Shows and more in this issue which, by the way, got a bit larger than normal. Oh well, more to enjoy.

Don't forget about upcoming shows – [O Scale South in February](#), the [O Scale March Meet in Chicago in March](#), [Harrisburg All O Scale Meet in April](#) and the [Strasburg 2 Rail Train Show also in April](#).

And... I forgot as we ran long, next time we'll look back at the Danville, IL show.

We hope you have a great holiday season, whatever your persuasion, and stay safe this New Years.

Happy Reading & Happy Modeling,
Amy & Dan Dawdry

In Memoriam



We have lots some great modelers and friendly helpful people these past two months. Thank you to [O Scale Central](#) for helping with this memoriam.



David William Richter

David William Richter 78, of Amherst, passed away surrounded by his loved ones on Thursday, November 16, 2023.

Born on December 14, 1944, in Philadelphia, Pennsylvania. He and his kind demeanor and witty sense of humor will be sorely missed. He was the son of Henry and Martha Richter and honorably served his country in the US Navy. David retired from SEPTA in Philadelphia where he worked as a controller. He enjoyed spending time with his family and was an avid collector of O-Scale model trains. He was a long-time member of the Masonic Temple and had the privilege of serving as Worshipful Master. He had recently become a member of the Moose Lodge. Long time member of the Cherry Valley (New Jersey) Club and was the sparkplug for the Eastern O Scale shows at Easton, Denver and Wind Gap in the 1980s and 90s. These were the predecessors to the present Strasburg shows.

Gary Schrader

Gary Schrader, who passed away on or about November 1st, was a well known west coast craftsman who was responsible for highly successful projects like the Key drives. A post from Gary on the O Scale Central website ([OscaleCentral.com](https://oscalecentral.com)) describes his spectacular layout and lists some of his construction articles. <https://oscalecentral.com/gary-schrader>.



Paul Gribbell

Paul Gribbell, who passed away on November 19th, was the founder and sponsor of Chi-Town Union Station, an OS2R layout that filled a 10,000 square foot former Safeway store in Commerce Township (Michigan), north of Detroit. With an enormous layout, complex electronic control system and a wide variety of quality equipment, Paul opened Chi-Town to the public, with a particular focus on entertaining and educating young people. Paul assembled a dedicated crew of volunteers to operate and maintain the layout. Paul's family has offered the layout and building for sale, but hopes that it can be kept open to carry on Paul's work. See <https://chi-townunionstation.wordpress.com/> for information and photos.



Terry Nathan Terrance

Terry Terrance passed away on December 2, 2023. He was born on February 4, 1952 to parents Peter Terrance and Rosa Mae (Parent) Terrance in New York City’s Lower East Side, and he grew up in that area. His early interests centered around astronomy and science, electronics, model railroading, hunting, scuba diving, and camping, most of which became lifelong hobbies. He earned Bachelor’s and Master’s Degrees from Columbia University in New York City, and, later in his working career, an MBA from the University of New Haven in Connecticut.

While at Columbia University he played on the college’s football team; he also became involved in the Columbia University Rifle Team; afterwards he was for many years that college’s Rifle Team Head Coach. He also taught astronomy on the college level as an adjunct.

Terry was employed in engineering applications such as avionics, as a computer systems and design hardware and software specialist, and Defense Contracts specialist throughout the period from the 1980s through 2016 for companies such as Singer, Sikorsky Aircraft, BAE Systems, SAIC, and Raytheon Technologies. He was known and respected for his expertise in both the Defense Contracting community and among military contacts as well.

Terry was extremely knowledgeable in many disciplines, and was regarded as an ‘answer man’ by his family and friends regarding questions related to auto and home repair, topics in science and its applications, firearms, hunting, and model railroading. He was passionate about Second Amendment rights and was a firearms instructor for many years. He brought his expertise with computers to the model-railroading community, and he authored a number of articles for various model railroading magazines.

He is survived by his wife, Carol Surdukowski, and three children, Elizabeth, Peter, and Christine Terrance; his son-in-law, Daniel Conforti; his brother, Kevin Terrance; his sister and brother-in-law, Grace Ann and Steven Schmidt; and his niece and nephew, Jessica and Paul Schmidt.

John Patrick Dunn

John Patrick Dunn, Sr. died peacefully due complications from a recent stroke on December 15, 2023 in his Egg Harbor Township home.

John is survived by his wife, Patricia Dunn (née Haspel) of Egg Harbor Township, NJ; children, John Patrick (Dana) Dunn Jr. (Dana Dunn), and Jennifer Fiedel (CAPT Ethan Fiedel, USN) and his adoring grandchildren: Weston, Hayley, Emmalyn and Avery.

John was born in Philadelphia, PA on July 11, 1956 to Mary Ellen Kronemeyer (predeceased) and John A. Dunn (predeceased). While in Philadelphia, John was always fascinated with the local trains, which evolved into his lifelong hobby of model railroading. He moved to Somers Point in 1971 and attended Mainland Regional High School where he met his future wife, Patricia. During his early years in Somers Point he joined the Patcong Valley Model Railroad Club. After graduating Mainland, John eventually found his calling as an insurance salesman and worked at Prudential for many years before, along with his wife, establishing his own company, Dunn Insurance, in 1988 which is still in operation today.



A common theme of John’s life was building a sense of community with those around him and being “all-in” in whatever he was doing. John made it a point to be very active in his children’s chosen pursuits as he

sponsored, assistant coached and supported multiple soccer, baseball, and cheerleading teams as well as Boy Scouts. He was a very active member of Keystone-Belcher#153 Masonic Lodge, served as President of Northfield Linwood Kiwanis Club, also served 6 years on Northfield's School Board, and on the Northfield All Sports. John was also very active in the Cherry Valley Model Railroad and Jersey Shore Live Steam Railroad Clubs.

John was typically the life of the party and took the time to be present with whomever he was with. He truly was someone who enjoyed getting to know new people and ensured everyone was included. During this time of year, he was known to dress up as Santa and visit the schools to spread holiday cheer. John was a larger-than-life character and will truly be missed!

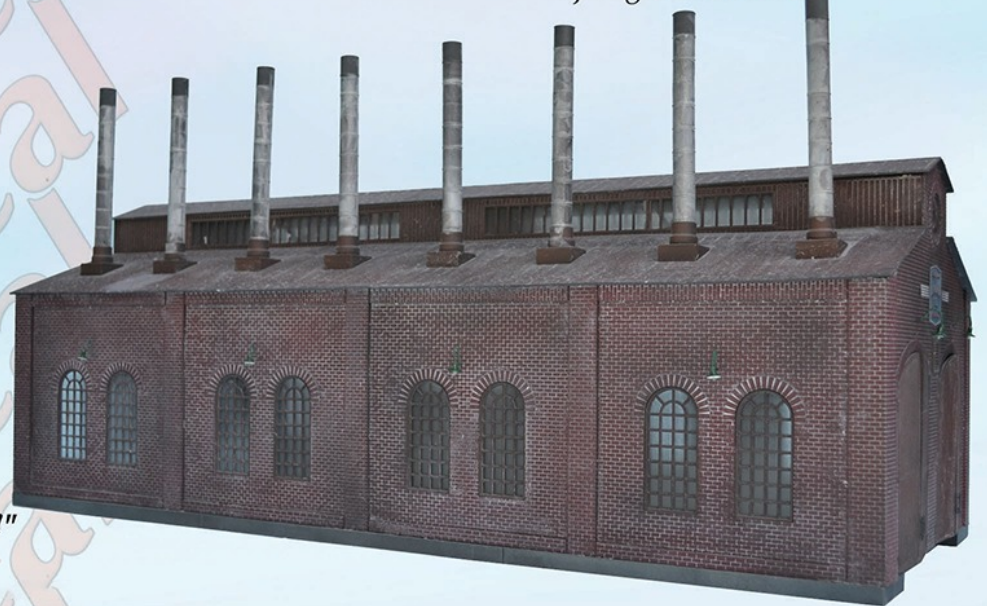
Get Real Productions

O Scale model building services by Jeb Kriigel
Custom high quality railroad buildings

Kitbashing
Scratchbuilding
Craftsman kit building
Custom painting
Realistic weathering
Super detailing
Quick turnaround with
progress updates
Commissioned &
freelance work
Creative, Imaginative.
and Realistic
Specializing in unique &
one-of-a-kind creations
All work guaranteed by a
Model Railroad Craftsman

"We photograph what we build!"

Call or write for a free quote:
Get Real Productions
11 Out of Bounds Road
Palmyra, VA 22963
Voice: 434-589-2660
Fax: 434-589-4898
kjkiigel@aol.com



THE S RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
ONLINE MAGAZINE
SCALE

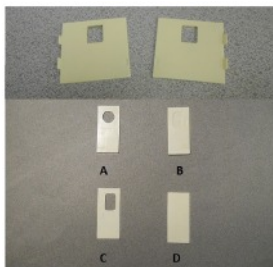
Don't forget that we also publish The S Scale Resource Magazine on opposite months from The O Scale Resource Magazine. More articles that you may find useful along with a different New Tracks column.
Read free today!



Delta Models

Cast Resin Parts for O Scale Passenger Cars

Baggage Doors
and
Vestibule Doors



Visit Us at www.deltamodelsusa.com

Model Trolley Specialist For Over 40 years

St. Petersburg Tram Collection
Car Works * MTS * Q Car * Bronze Key
Ken Kidder * LaBelle * Clouser * Ashland
Parts * Trolley Poles * Power Trucks
Kits * Overhead Wire & Fittings

NEW TORONTO CLRV KITS ARE NOW SHIPPING!
KIT INCLUDES INTERIOR, UNDERBODY AND NEW DECAL SHEET
NEW PCC KITS, ILLINOIS TERMINAL INTERURBANS
& MORE COMING!

The Berkshire Car Shop

505 Morning Dove Road, Audubon, PA 19403-1807
610.631.9751 Evenings and Weekends
Email berkshirecarshop@comcast.net

ALL-ABOARD-TRAINS.COM



**First time ever in O, On3
scale. The New Century
manual switch stand.
\$28.95**

O Scale Decals plus limited HO decals



for steam-diesel era freight cars for
"as-delivered and repaint schemes"
from 1930 to 1960, with over 650
decal sets representing 200 roads.

Available at protocraft.com

PROTOCOLRAFT™ DECAL LINE

Stevenson Preservation Lines

O Scale

Kits and Parts From Past Masters

Baldwin Model Locomotive Works
Lobaugh
Adams & Sons
Lenoir
Kansas City Kit
Hines Lines
Alexander
Pearce Tool Co.



We are moving. Check our web site for details

www.stevensonpreservationlines.com

DES PLAINES HOBBIES

**Kits or RTR
Brass
Books
Supplies
Structures
Detail Parts**

3-½ Miles north of O'Hare airport on Lee St.
1524 Lee St., Des Plaines, IL. 60018
Ph. 847-297-2118 Open Week Ends
www.desplainshobbies.com

Check our on line store. We ship daily.

International sales welcome. Thousands of items listed.

Call our friendly staff



YOUR AD HERE!
... OR HERE!
... OR HERE!
... OR THERE!!!
FOR AS LITTLE AS \$56

**CLICK HERE TO
EMAIL JEB KRIEGL**

ADVERTISE WITH US

SIGN UP

Did you miss an issue of The O Scale Resource? Forgot to look? Well, sign up here and never miss another exciting issue. We'll send you an Email when the latest issue is loaded to our site. Don't worry, we won't sell or post your Email address to anyone! Click Here to sign up today!



O Scale South 2024 9th Annual Atlanta O Scale 2 Rail Meet

9am- 2pm on Saturday February 24, 2024
Cross of Life Lutheran Church

1000 Hembree Road, Roswell, GA, USA

Swap Meet & Modular Layout Display

Contact Dan Mason @ daniel@masonlaw.us
or 770-337-5139 to reserve tables and info

Sponsored by the the Model Railroad Club
of Atlanta



Crown Trucks
3D printed
from
appropriate
resin nylon
axle inserts
Intermountain
wheels

\$37.50/pair; 3 pair for \$108, each plus shipping
Vulcan 70T and ASR 70T trucks coming

Check out John Armstrong's Nighthawks, B&O Dressler OH
Tower, Canandaigua Southern boxcars and FGE Reefers
Wit-and-Wisdom-Models.com

O SCALE TURNOUTS™, INC.

"Ready to Lay on your Right of Way™"

Features:

Designed to the NMRA, A.R.E.A. and 1921 Maintenance of Way Standards.
Cast frog, guard rails and points for a prototypical appearance.
PC ties resistance soldered to the rail to insure precise track gauge.
Solid (non-hinged) Points.
Prototypical tie spacing.
Staggered rail ends.
DCC compatible.
Insulated Frog.
Made in the U.S.A.

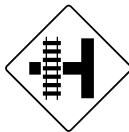


CONTACT:
P.O. Box 818
Hamburg, MI 48139
810.231.4461
wcm@oscaleturnouts.com



**YOUR SOURCE FOR
OVER 80 RAILROAD
LETTERING, RAILROAD
ROMANS, ALPHABETS,
SILHOUETTES,
DINGBATS, TRAINS,
PLANES AND MORE.**

RailFonts.com



SCRATCH BUILDING SUPPLIES

PC and Wood Ties - Barrels
Poles - Eye Bolts & Rings
Blackened Cable & Chain
Window Glass - Sheet Metal
Nylon & Brass Screen
Plastics - Hand Tools
Straight & Coiled Wire

DRY TRANSFER LETTERING

Cars & Locomotives - Stripes
Numbers - Chalk Marks
Building & Product Signs
Alphabets - Car Names

Shop Online - cloverhouse.com



Clover House
Box 215D, Veradale, WA 99037-0215

Essential Tools for your Garden Railway

Get Outside and Play

Less time for setup means more time
for FUN! Blunami wireless sound
decoders are easy to use in your
garden railroad.

Learn more: soundtraxx.com/blunami



SOUNDTRAXX

Durango, Colorado USA
(970)259-0690 | sales@soundtraxx.com

NEWS YOU CAN USE



Central Locomotive Works News

An interest sheet for the SD40SD40-2 and SD45-2 locomotives is being circulated. The SD40-2 series will include many variations including the SD40-2W and SD40-2F "Red Barn" Canadian versions and SD38-2 and SD39-2 models. The HT-C and Flexicoil (CR versions) trucks will be upgraded with floating bolsters and roller bearing journals.

Also, in the works is the SD40 series which would include SD38 and SD39.

A "coaster" drive for these new models is also in the works. The new gearing ratio will be 1:.8 and power provided by a 9.9:1 gearmotor. Pricing is not yet available, but should be competitive with similar offerings.

The projected price for these is \$2,450.00. The price includes a newly designed full cover, foam cushioned box and shipping carton.

There are a few upgraded EMD spartan cab kits still available. The kit includes etched brass cab sides and miscellaneous details to replace the early cast cabs used for CLW GP35, GP40, SD35, and SD40 models. Cost is \$55.00 plus \$7.50 s/h.

If interested, contact Lou at 760 221-5558 or at clwusa@verizon.net



Brad Kowal will personally assist with the project communications for the newly announced Central Locomotive Works Announces SD38-2, SD40-2 variants and SD45-2 in O Scale 2-Rail Brass.

\$2450.00 Estimate plus shipping: Locomotives will be assembled with a painted chassis and unpainted body.

These locomotives will be the first to be equipped with the new CLW tower drive which will include a

Pittmann gearmotor, choice of chain or belt drive and 0.75:1 axle gearboxes.

O Scale and P:48 Options

New CLW offerings will now include a custom full sleeve foam cushioned box.

Production to begin mid-2024

Deposit of \$1,200.00 due May 1, 2024

Est. Delivery mid-2025

Choices are as follows: SD38-2, SD40-2, SD40-2W, SD40-2F, SD45-2, SD45-2B

For the SD40-2s, the following short hood options are available: 81' short and high, 123 and 126 low.

Those interested in placing a reservation should email TwoRailOScale@yahoo.com Please include: Name, Email Address and Phone Number.

O Scale or P:48

Intended Road (for when road specific details are possible)

Once the reservations are full, Lou Houlemarde of Central Locomotive Works will take it from there.

Prototypes shown in the following links.

<https://www.railpictures.net/photo/826052/>
<https://www.railpictures.net/photo/476145/>
<https://www.railpictures.net/photo/770631/>
<https://www.railpictures.net/photo/811086/>
<https://www.railpictures.net/photo/833670/>
<https://www.railpictures.net/photo/468342/>



We received this just after the last issue went out so sorry for the short notice... [Norm Buckhart wrote in to tell us: Protocraft](#) will be taking a sabbatical beginning January 1 through March 30, and will be closed during that period.

On January 1, Right-O-Way under Jay Criswell will be taking the 'Finescale Parts' line on a permanent basis

The body bolster kits for brass and Urethane models (1080 and 1081) will be moved to the Protocraft truck line, and will remain in stock.

If you anticipate any needs from [Protocraft's](#) stock before April 1, you should put an order in prior to the end of the year. Shipments will go out during the first week of January 2024.

Dylan Lambert of [Lambert Locomotive Works](#) says: So part of my goal is to craft rolling stock in O scale that hasn't been done before. In keeping with that mission statement, the introduction John Dunn made with me to the G39, and by extension the G38, seemed like a good fit. The G39s were introduced at a time that taconite was becoming the main form of iron ore being shipped by rail, and represented an improvement over the earlier G38 design with other revisions better done to suit Taconite shipment.



At present, I'm producing cars on a batch system. In short? If you want it, I've got Google forms linked to the LLW website where you can leave your info and how many cars you'd want. At bare minimum, I want to see 30 cars for a batch. Eventually there will be products I can stock on a regular basis, but for the moment batches are the way for me to go, as I build out the catalog and work on inventory storage space. Being made to order en mass for what customers want has been rather helpful so I can work around construction at home. So far with the projects to date, from time of opening the order books to shipping it's about eight to ten weeks.

For the price point of \$40/ea less the trucks and couplers? Not only am I proud, you can't beat that



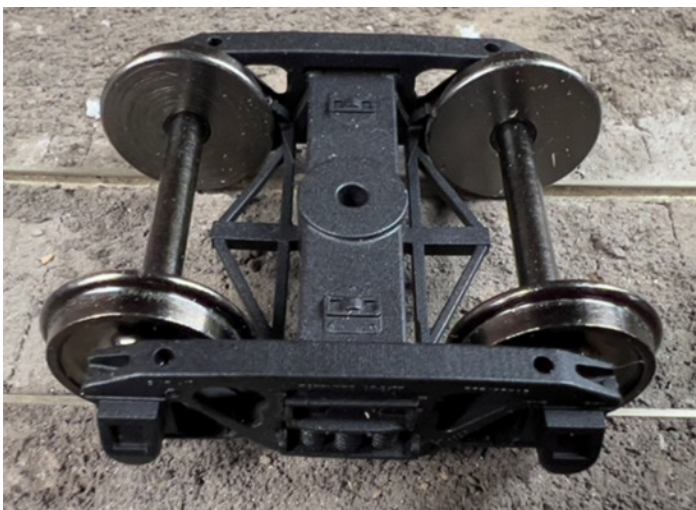
really anywhere, even if you do need the trucks and couplers. And while there's been some changes to the design and some detail parts to better suit them for mass 3D printing, there's no doubt that you're looking at a G39 when you open the box. There is also the G39A, a modification of the original pattern. The parts come with these to allow the builder to configure the car reliably as a G39 or G39A. And depending on the trucks used, you could also configure your car as a G39B, which represented both G39s and G39As retrucked with ASF trucks as opposed to the original Crown trucks. Suffice to say this certainly takes the "universal" concept I've used on WWI Simplex locomotives to another logical step.



There's three people that deserve thanks here too. The late John Dunn, George Losse and Jim Musser, who all were a major help in refining the G39 to get the design to where it is today.

David Vaughn of [Wit-and-Wisdom-Models](#) sent us for review a pair of Crown trucks, 3D printed from appropriate resin, nylon axle inserts, Intermountain wheels. Available through wit-and-wisdom-models.com. Price: \$37.50/3 pair; \$108.

(See their ad in this issue)



tough trucks - with some lasting all the way into the 1970s.

OK, we have a long life span with these on the Pennsylvania Railroad. Thoughts... they are great rollers. The nylon axle inserts along with the InterMountain trucks are fantastic. Each tuck weighs about 1.4 ounces. There are no telltale layer lines, just a nice slightly rough surface with readable printing. I do not like that as most all plastic trucks are smooth. Go look at a real truck side frame. It ain't smooth! The trucks are not sprung which to me is not a big deal.

If you are a Pennsy nut or have Pennsy equipment that matches the cars referred to, these will look and run great under your equipment.

[For more information check their Website.](#)

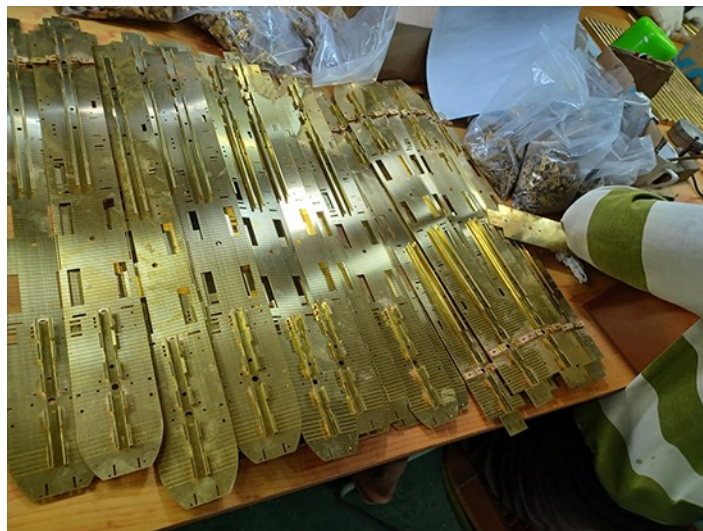
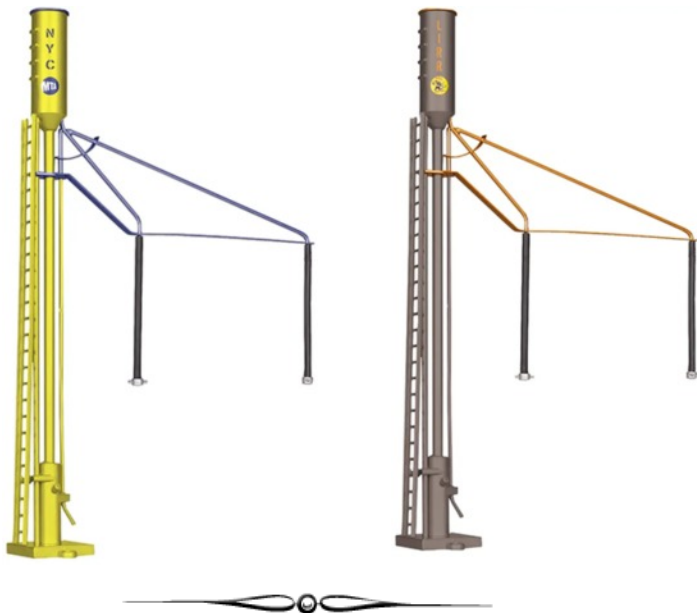
Now, we don't reviews per say as I am not an expert at everything railroad. BUT.... I can take a look at these and see how they work. Chat GPT tells me: *The PRR Crown 2E trucks refer to the Pennsylvania Railroad's Crown 2E type of freight car trucks. These trucks were a design used for the undercarriage of railroad freight cars, providing support and allowing for smooth movement on the tracks. The Pennsylvania Railroad utilized various types of trucks for different purposes, and the Crown 2E was one of them.*

From N Scale Model Railroading Projects & Resources Website: *First built during WWI, these heavy duty 70 ton trucks were used under a variety of PRR equipment (F25, F25b, FN, FNa flats, G22, G22a gondolas, and H21a, H21b, H25, H22a hoppers). The sideframes were cast steel and included metal spring planks. They were built along Andrews design parameters, but had some special feature(s) that encompassed the Crown patent. Most notably associated with PRR's H21a hoppers, these were*

Atlas announces a special run of sanding towers? Yep, Atlas is pleased to announce the upcoming release of the Premier O Sanding Tower in two special livery offerings for Atlas Authorized Retailer, Trainworld of Brooklyn, New York. The towers will be available in very limited quantities beginning this Fall.

Item No. TWTL36 Long Island Sanding Tower
Early Order Price: \$69.99 [Click HERE to order.](#)

Item No. TWTL37 MTA Sanding Tower
Early Order Price: \$69.99 [Click HERE to order.](#)



These will be stunning examples of truly custom car building. [Contact Roger](#) for more information.



Canadian National Railways Sanmore Subdivision

CONSTRUCTION UPDATE – THE END OF THE LINE!

By [Serge Lebel](#), photos by the author

Email author by clicking on their name.



A cut of Canadian National locomotives on their way out to retirement in Campbellstoke yard. This was their final run.

I guess the title says it all: this is the end of the Canadian National Sanmore Subdivision... Sad news, right? Well, not really. Let me explain...

First of all, let me put your mind at ease. The end of the Canadian National Sanmore Subdivision does not mean it is the end of the layout. It is actually quite the opposite. The big change here is in the concept and operation of the layout.

A change of mind...

It takes a lot of courage to terminate a model railroad that is just not working. When I designed this layout back in 2014, my goal was to create a fictitious subdivision that is part of a class 1 railroad in O scale. I thought having a 32' x 58' space was more than enough to do just that, but I was wrong. O scale takes up a lot of real estate, and to model it correctly for it to look and feel adequate in my case, would have required 4 times that

area, around 8000 square feet. In my defense, I have to say that this is only my second attempt at building a layout in O scale. For over 22 years, I was an N scale modeler. I built a few basement-sized empires that were class 1 railroads. In N scale, I was a small player having only 1700 cars and 260 locomotives... Yeah I know, that sounds crazy, but this is how N scale differs from other scales. So when I migrated to O scale, I was still in that mindset, since this is all I ever modeled.

On paper, it all looked good. I started building the layout and purchasing locomotives and cars like there was no tomorrow. Signaling would tie it all together to create that big time railroad feel. Life was good! By the time I was ready to start on buildings and scenery, I decided to operate the layout just to see if I needed to make any changes or corrections to my track. This process went better than I anticipated. The trains were running well with very few derailments, the detection and signals were doing a great job of keeping the traffic moving, and the overall space felt very comfortable for 5 or 6 operators. The only change I had to make was to my turnouts as the points on my soldered throw bars were constantly beaking loose. But there was always something that looked out of place. I just did not get that same feeling of big time railroading as I did with my previous N scale layouts, and that kept me up at night trying to figure out what I had missed in my design.

The revelation...



Running yard switchers on the main line was never even a thought.

Between May 2022 and October 2023, I was so displeased with the operations on the layout that I started to neglect working on it and concentrated on other things. I thought I just needed a break, and coming back to the layout after missing it would bring back that old feeling. Horse feathers! When I turned on the lights in October and ran a few trains, I was still feeling like I had missed my goal and should give it all up. As I started to empty my yards and put cars and locos in boxes to sell them, I found myself doing what you could call a transfer run. I had 3 cars and a SW1200 left at one end of the layout which I decided to bring to the staging yard on it's own power just for old times sakes... And then it hit me! Running that small switcher on the main line (that never

happened before because it was not a road unit – prototype rules, not mine!) with only 3 cars looked so good! That was the moment I realized that my layout was way too small to run trains of 2 or 3 big Dash-9 locos and 20 cars... It did not fit, and it never felt right. From that moment, I spent the next few weeks running switchers and 4-5 car trains all over. My layout was suddenly big enough to give me the feeling of actually going somewhere and serving a purpose. But I had all these big locomotives and tons of cars... what should I do???

Making those hard choices...

Okay, so I finally understood that my needs and wants had changed. I had to re-think my entire concept and decide what my next move was going to be. I knew I wanted smaller locomotives and less cars, but I am still a modern era modeler (my apologies to all you transition-era modelers, but 40 ft boxcars just don't cut it for me). I put so much effort in signaling the layout and wanted to keep that aspect of it. So what do you do when the prototype and real life just don't line up with your goals? You make up your own reality!! It was decided that I would abandon the Canadian National Railways and create my freelanced shortline. No more restrictions and getting judged for modeling something not 100% correctly. I will re-write the book on railroading in my own terms.



The new concept.

So my new concept is a modern day shortline that has a long history behind it and good mechanics in the shop! I just love older 4-axle diesels, and they are so much easier to find in O scale 2 rail. I only want 5 locomotives on this shortline, two cabooses and yes, the caboose is still in use in real life where I work, so don't tell me they are a thing of the past.



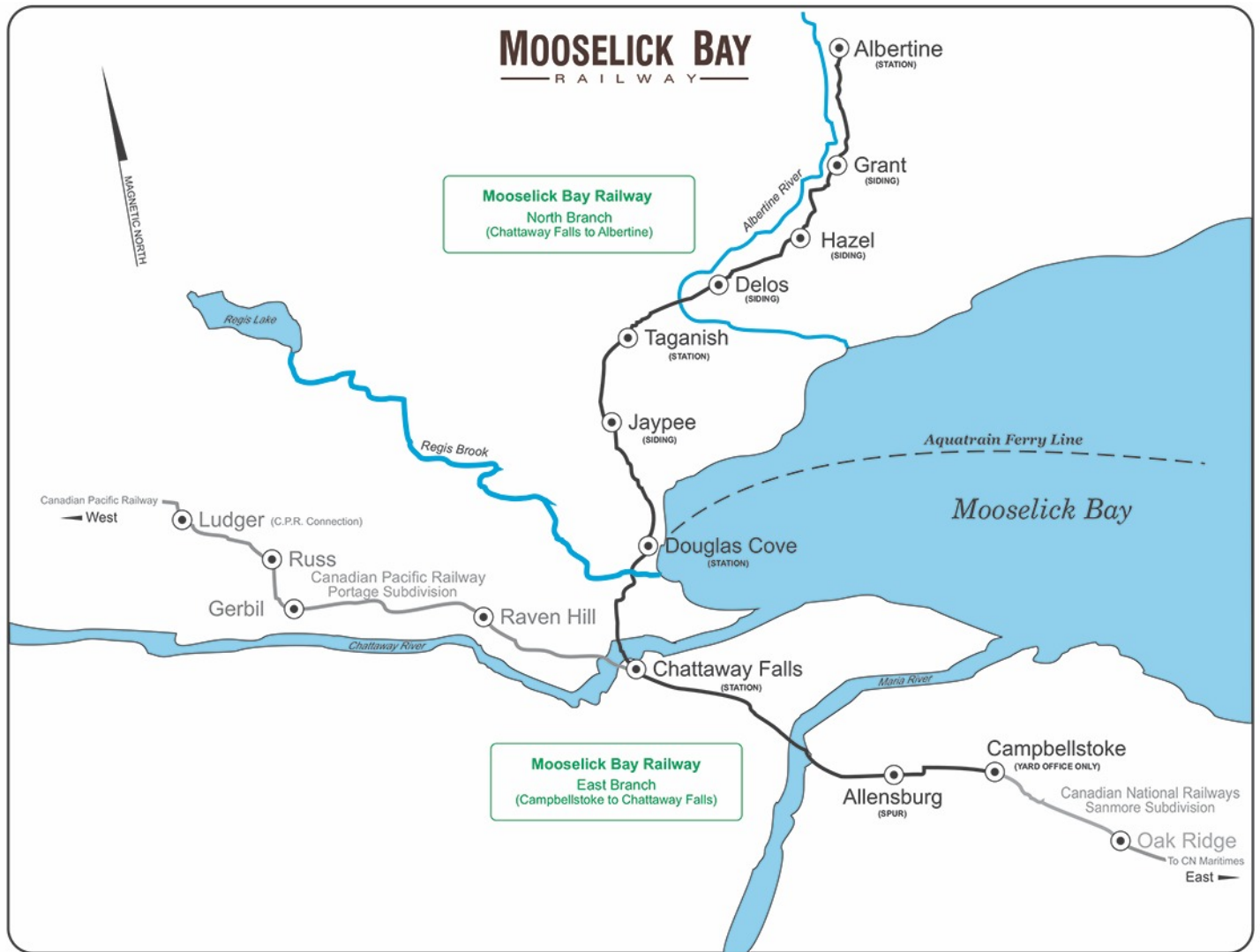
This is one area where I am following prototype practices and equipped my cabooses with marker lights and ditch lights (old DCC decoder inside the caboose for full lighting control) so reverse running on the mainline can be done following C.R.O.R. Rules.



MBR Caboose no.5 running in reverse on the mainline near Chattaway Falls.

This shortline however does not own any revenue cars. Maintenance is done by contractors or old equipment purchased from other railroads, namely CN (you did not seriously think I would get rid of all those converted cars!). I modified the systems map just a little. I am keeping all the station names, but I added a few more stations way up North (not modeled on the layout) all the way to Albertine and changed the name of the Bogus Bay in Douglas Cove to the Mooselick Bay. CN will still do a very short appearance by taking cars out of the OakRidge staging yard and do a transfer run to Campbellstoke, where an interchange will happen.

This means I get to keep a couple of my smaller road units and my brass cabooses. See map below.



The new systems map.

And so was born the **Mooselick Bay Railway**. Since all my town and station names were already freelanced, it makes perfect sense to keep everything as it is. I will eliminate the Sanmore and Lacroix subdivisions and re-name these the East Branch and the North Branch. Because this is a modern era shortline, the signals will stay. Having the CTC machine suddenly makes more sense! And my lousy handlaid light rail (code 100) is now a perfect fit for the railroad.

It just seems like this was meant to be, and I am finding my passion all over again. At the time of writing this update, I only have one RS-3 and one caboose painted, and I am getting my beat back in scratchbuilding more structures. I am also re-writing all my paperwork. I still don't know if I will change the name of the layout or how I will handle this migration so that I don't confuse everyone. I will have more details on this new concept in future updates, and as I make them up (that's the fun part!).

I am hoping my followers will not be too disappointed by my change of heart and feel I let them down. It just goes to show that nothing is written in stone and we evolve as modelers. It is only natural that the layout evolves along with it!



Over-Thinking While Building the Extension to Belle Vernon

By George Paxon

Email author by clicking on their name.

Part 1

With the move to new quarters, several changes on the Mountain Electric were possible. Under the old scheme of things in its last home, Belle Vernon, the west end of the line, and Somerset, the east end of the line, were going to be the same four track yard with approaches from different ends. I managed to organize just a little more length in the new layout room when my domestic manager was not looking, so the two terminals could be different locations.

My last On3 layout was a fully double deck affair. Double decking is a great way to increase the length of your run without an increase in layout room size. But double decking is not without its problems in O scale. Problem A is that generally the top layer is too high and the lower layer too low. In O scale, if you move the two layers closer together to improve Problem A, it can result in problem B which is poor access to one or both levels. I had both problems A and B on the last layout, and battled with them for 15 years. As she does like to watch the trains and comes to supervise work, particularly scenery, occasionally; my domestic manager also grumbled about the top level being hard for her to view: see **Photo 1**. I had my issues with problem B, too, as you can see in **Photo 2**. Double decking works very well in HO where layout depth can be less and vertical separation does not need to be as great. We decided early on that the new traction layout would be a single level affair. That was how it was initially planned at its last home.

Photo 1



Photo 2



But it is extremely difficult to not succumb to the temptation to use the double deck approach to add a bit of length to your line when you are real estate poor. I am a weak person I guess, and, when setting up the layout in its new home, decided to build the extension from Jacobs Creek to Belle Vernon on an upper level. Hopefully this will be the only double deck on the new layout. And to make sure problems A and B above would not bite us again, or at least not bite as hard, we did three things. First, with the top level quite high at 72 inches above the layout room floor, we built a 14-inch-high raised walkway for better access to it. Second, we provided a minimum of 20 inches of separation between the two levels. And third, the bottom level was designed as 24 inches deep and the top level mostly 12 inches deep to ensure good access to the both levels.

The original idea for the top-level Belle Vernon Extension was that it would just be staging to provide a source of traffic and just a place to stash cars and trains. As I am getting old and would like to finish this layout in my remaining lifetime, it initially seemed a good idea to streamline the work in building the extension.

We duly acquired a supply of code 148 track and some very sharp code 148 turnouts – all ready-made mostly second-hand stuff via EvilBay. The idea was to use these for the extension as it was not to be premium layout area.

We have always hand laid track for the last 50 years. It was a necessity for On3 early on as no commercial track or turnouts were available then. After a bit of practice, hand laying track and building reliable turnouts became routine tasks. The tasks just took heaps more time than did track laying with ready-made stuff.

There is still not much around the O scale world in the way of ready-made code 100 and 125 small radius standard gauge turnouts though. At least none we are aware of that is. Previously we had used Old Pullman and BK Industries turnout kits for some years on On3 layouts. The Old Pullman ones, when Beat Hug owned the firm, were great products. Beat even supplied me with tight No 3 code 100 standard gauge turnout kits with curved frogs when we first began to contemplate adding traction to the old On3 layout. Once he sold the business, using the Old Pullman products required more work than scratch building them. We also used the BK Industries turnout kits in On3 once they became available. They were a good product and saved quite a bit of labor making the frogs and points from scratch. But laying the BK turnout otherwise was about the same amount of work as fully hand-built ones. With the introduction of the Fast Tracks jigs, making frogs and points, and laying turnouts, is much simpler and faster and produces very accurate track.

Another thing learned along the way is to use lots of copper clad PCB ties in turnouts. Even when painted grey they don't perfectly match the wood ties and distract a little, but are well worth the sacrifice to obtain more maintenance free and reliable turnouts. So, generally the Mountain Electric, the Belle Vernon Extension excepted, is fumbling along with mostly hand-built turnouts and a combination of hand laid and commercial code 100 and 125 track. I have Fast Tracks jigs for No 4 and No 5 turnouts. I wish they would do us a curved frog turnout jig with 24-inch radius. That would solve many problems for us traction modelers.

Photo 3



Originally, some simple brackets were knocked up on which some boards would be fastened to hold the staging tracks. These brackets were two pieces of plywood screwed to the sides of a short length of 1 X 4 timber. The brackets were then screwed to uprights fastened to the layout room walls. Holes in the brackets were provided to run the wiring. This was all planned as a quick and dirty project. **Photo 3** shows the brackets designed to support the extension's track.

Using some of the code 148 ready-to-run track here on the Belle Vernon extension was seen as a time saver. I am not a fan of code 148 rail. Too heavy for my liking certainly for a 1930s short line. It is OK if you model the modern heavy haul era, I guess. But our thinking here was it would be a reasonable compromise on the Belle Vernon Extension as it was “just a staging area”.

We started the detailed planning of the extension at the Jacobs Creek end and laid out the track center line along the wall on the new top level for a distance. Then the terrible thinking started to set in. We thought the first corner encountered would be a good location for an interchange with the Pittsburgh and West Virginia Railway (P&WV) steam road. After all, it only added a turnout and a bit of siding. This was added to the plan. Actually, it was two turnouts and a good run of track.

As the main line of the ME Ry continued along the upper level toward Belle Vernon, the long straight run after the P&WV interchange looked a bit barren and boring. How ‘bout adding another turnout and a bit of siding and creating the “Belle Industrial Park”?

Well, the P&WV interchange and the Belle Industrial Park locations looked naked. The more we thought about them the less happy we became with the idea of just relying on our imagination for both these locations. How could we just shove cars onto blank tracks?

Well, most of you have heard about the fellow that went into the swamp just to drain it and found himself up to his hind quarters in alligators, have you not? That is much like the story of the Belle Vernon Extension so far.

Photo 4



We got to thinking that the bare layout room wall would not have all that much eye appeal along the extension. We decided on a backdrop of 1/8 inch thick MDF all along the extension to resolve that issue. Joints were taped and set just like wall board. Then we primed the face of the MDF and painted it with my standard blue-grey sky color.

But, just having the sky color was quite bland looking. **Photo 4** shows the area after the backdrop was installed and while painting the sky backdrop and setting the joint between backdrop and ceiling. We were also fixing a crack in the ceiling plasterboard that had appeared after lining the ceiling of the layout room. You are looking eastward on the layout. The foreground will be the east end of Belle Yard and the west end of the Belle Industrial Park. The distant corner, behind the paint can, is the planned location for the P&WV interchange. The bumps in the backdrop are the MDF backdrop curving around the portal columns that form the skeleton of the layout shed.

Next, we got the urge to break out the scenery paints and add some hazy background hills and then some close-up hills over the bland sky on the backdrop. Then came some painted trees to provide for something closer than the hills. Not being much of an artist, to prepare for a painting session, it was essential to drink liberal amounts of red wine to make the creative juices flow. This meant that the days after painting sessions were a bit foggy and rather unproductive.

And the abrupt 90-degree transition from the flat benchwork to the flat backdrop worried me. Again, I thought just a little bit of scenery along there could disguise and greatly improve the transition. So, scenery was made and installed. You might recall an article some [OSR issues back where we built a split rail fence](#) to doll up a narrow bit of scenery just in front of the backdrop. This was along the Belle Vernon Extension, behind the P&WV interchange siding, and it was another case of too much thinking.

Photo 5 is a view along the extension with the backdrop painting done at this point and while thinking about, and plotting, the transitional scenery. **Photo 6** is after the transition bits have been plastered and had preliminary scenic work done to them. These are done as short pieces off the layout to keep the plaster mess contained, and then the pieces are positioned on the layout as required. Figuring out where each piece was to go where is always a challenge as they look quite different once plaster and ground cover has been added. This is the area between CT Junction, where the extension actually started, and the P&WV interchange.

Photo 5

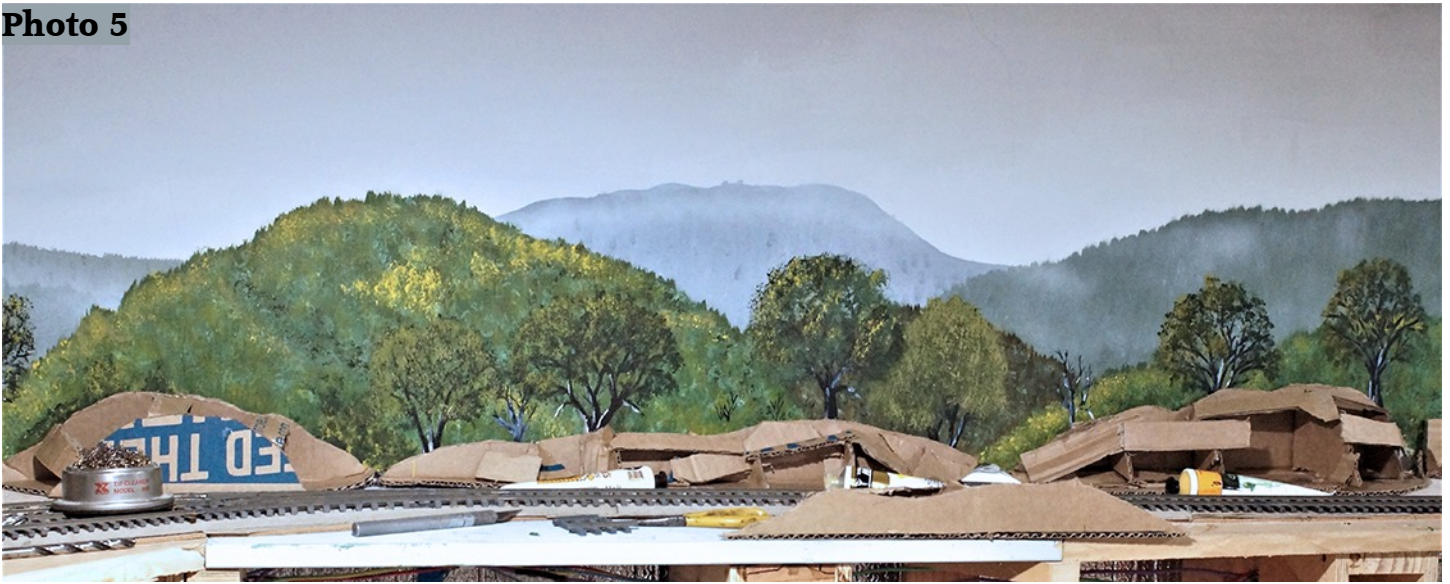
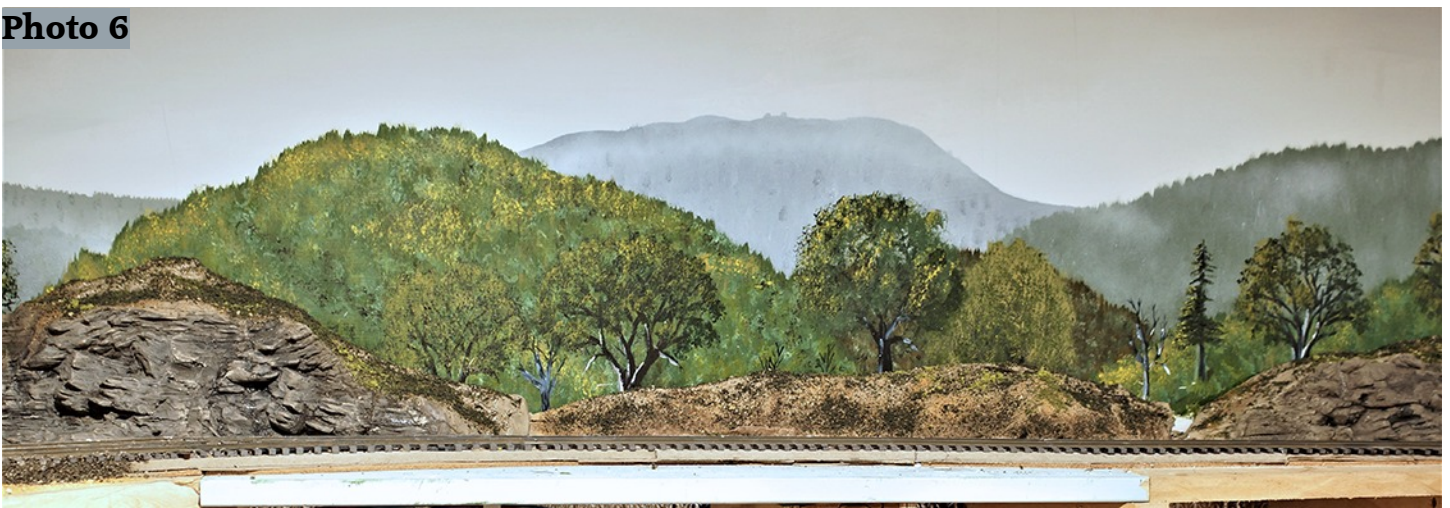


Photo 6



Then, of course, the track and the ground along the extension needed to be ballasted and scened since we thought it would look bare otherwise.

We have a thing for bridges and viaducts. Both traction lines and steam railroads in southwest Pennsylvania and northern West Virginia used many of them as the terrain was rough and seriously broken – quite mountain-like actually. You can see this in some of the accompanying **Photos 7 and 8** which are good examples along the area trolley lines. And, how would you like to walk these stairs in **Photo 9** to work and back every day? The

Photo 7



Photo 8



Photo 9



Pittsburgh area was famous for inclines to go up and down the many hills as you can see in **Photo 10**. At one time, about 17 such inclines were in operation. Sometimes one went up one side of a hill and another went down the other side. If you did not have the change in your pocket for the incline, you might need to walk the steps in **Photo 9**.

Photo 10



But a bridge along the Belle Vernon Extension was ruled out to ensure the necessary dropped level of the top level benchwork would not interfere with the principal bottom level of track and violate the separation criteria established. But what about culverts? Real rail lines had many of them to route water away and keep it from saturating the roadbed. They could be added without dropping the top benchwork level. So, added they were. More work resulting from too much thinking.

What about some buildings? We have quite a collection of them from previous layouts. The P&WV interchange got its name during this process – East Monessen. An appropriate station building was found for it in my hoard of buildings.

Photos 11 and 12 are basically, between them, the same view as **Photos 5 and 6**, with more work done on the scenery. On the left of **Photo 11**, you can see the station at East Monessen. Still has its name from the old narrow-gauge layout. Need to fix that. And the train order signal fell off the roof during storage so have that to fix as well. That is the signal lying on the platform. Just to the right of the station, you can get a distant view of the Monongahela River town of Monessen down the valley. The station at East Monessen was built from a kit of the old section house, used also as a station, at Lizard Head on the Rio Grande Southern. Can't recall who made the kit but it is very nice. To the right in **Photo 12** you can see a culvert. The layout fascia is installed but

Photo 11



Photo 12

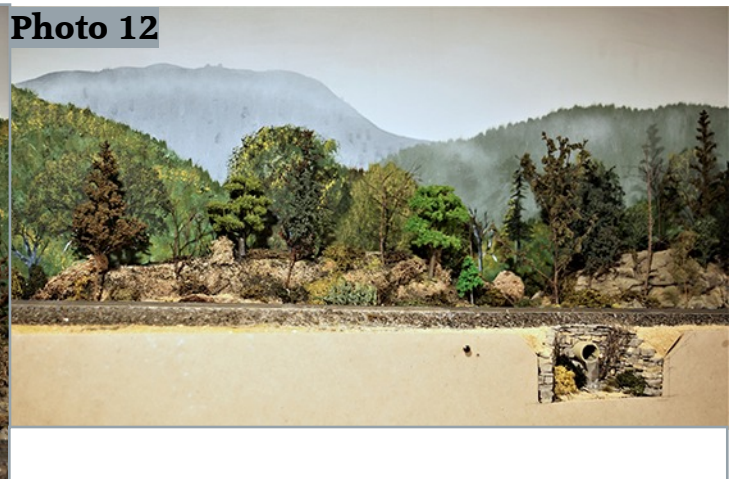


Photo 13



Photo 14



needs to be removed for painting. Photos always find our faults. I see there is an unplanted tree lying on its side in Photo 12 we need to deal with. Still need to work in more foreground scenery around the culvert location and between the track and the layout edge, but want to get the overhead installed there first though. Foreground scenery can be in the way of access sometimes, but it does provide several benefits. Robust foreground scenery such as trees, fences, etc. can provide a barrier to keep errant trains from falling from the layout where there is a danger. It also provides a very pleasing and prototypical view of trains passing through the scenery rather than just in front of it. **Photos 13 and 14** of the old narrow-gauge layout illustrates this effect.

Continuing with the buildings, the Belle Industrial Park, we thought, would be ideally suited to several flat background industries. They were added. This was also a good place to work in an on-hand section house so we did that as well.

We have also been thinking for some time about where on the layout to place a scrap yard so we could make use of all the junk accumulated in a box in the work shop titled "Scrap Yard Material". This box is where modeling mistakes, old wheel sets, narrow gauge trucks, odd bits and pieces that otherwise have no useful modeling purpose, leftover kit parts, train gifts from well-meaning friends that have no hope of ever getting used, etc., have been filed for safe keeping. (We never seem to throw anything away.) I had made an interchangeable scrap load for some new gons and needed a business to ship the scrap from as well. A scrap yard was eventually worked into the Belle Industrial Park plan.

Photo 15



Photo 15 is a view of the industrial park area while thinking and planning for the buildings there was on-going, and before the scrap yard decision was made. The large steel building front is a paper model by Clever Models.

An industrial park should have a sturdy fence to keep trespassers out. What about road access to the

Park? A sign was needed to identify the Park for arriving trucks and to help visiting layout operators. The buildings needed some lights and other details to add life and a look of use. When trying to add the fence, we came to find the clearance between a fence and moving trains to be a bit tight due to closely spaced tracks. Something creative was needed there so the fence just ran to the road crossing. Well, the resulting fence won't do much of a job in keeping out any trespassers, but it will help keep workers in part of the industrial area from wandering onto the main line. The plan was to put the "Belle Industrial Park" sign above the road crossing, but we didn't really have much room for the post on the east side of the road. And then we had concerns about the overhead sign conflicting with the eventual overhead trolley wire. So, the sign was placed on two low posts alongside the road into the Park. We had to quickly work out where the line poles for the overhead trolley wire needed to go as well as save a spot for a rail crossing warning sign. Our friends building prototype railroads would have had some of these same sorts of problems, so we don't feel too bad about it all.

A length of chain link fence was decided on to separate the mainline from the industrial park. This was made by sinking the posts, cut from 1/16-inch dia brazing rod, into holes drilled in the layout at scale 8-foot intervals and painting them flat silver. A length of chain link fence was made by cutting wedding veil tulle and painting it flat silver as well. The painted tulle was attached to the posts with super glue. The piece of fabric I cut from to make the fence material was not long enough for the entire fence run so it was spliced together. The glue and silver paint at the splice made the splice quite obvious and distracting, so we made a banner type sign, advertising the *Bentleyville Pioneer Days* celebration, and glued it over the eyesore. Bentleyville was a coal town along the Westside Street Railway west of Belle Vernon.

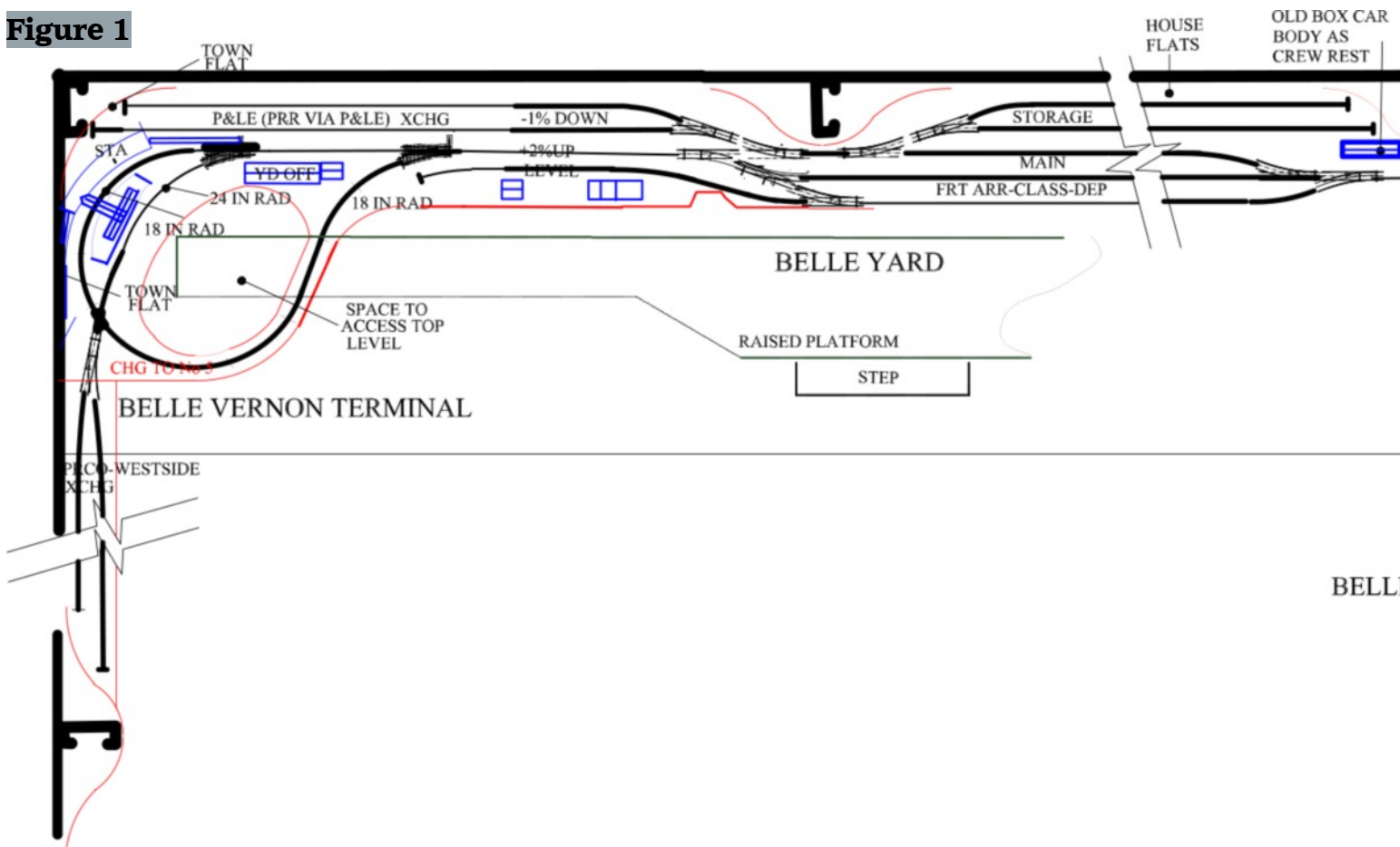
The road crossing into the Industrial Park used planks leading to the tracks and between the tracks on the mainline. For crossing the siding, planks were placed on each side of the two rails and gravel was placed between the planks and leading to the crossing as well as between the two tracks. Of course, standard Mountain Electric cross bucks were erected to provide some warning for motorists.

Photo 16 shows the industrial area when just about complete. The line poles and wires are installed on the main and the industrial siding. A work train has obviously backed into the siding to clear a scheduled train.

Photo 16



Figure 1



The final plan that had evolved for the Belle Vernon Extension, after a lot of thinking, doodling and modeling, is shown in **Figure 1**. The extension wasn't really built to this plan; it was just built to dreams and some rough sketches on sandwich wrappers and bar napkins. Then the plan shown evolved from what was. In engineering we call these "as built" plans just to make you think we are organized and actually do work to plans.

Well, we are not yet at Belle Vernon, but so far, we have done way too much thinking and quite a bit of modeling to get close to it. And this all started as just a bit of staging track. No wonder we are not making much progress getting the Mountain Electric finished. Maybe our **OSR** editor, Daniel, has the right idea: just prop up a few unpainted building fronts behind the track, don't worry about ballast and scenery, and get on with running the trains. (Just picking on Dan – he will have very nice scenery soon.)

Finally- Belle Vernon

Belle Vernon was envisioned as two parts from the start. One part was Belle Vernon Terminal which was to be the interchange for passenger traffic with Pittsburgh Railways Co (PRCo), the big Pittsburgh area traction line. The other part was Belle Yard.

The ME Ry actually connects at Belle Vernon with the Webster, Monessen, Belle Vernon & Fayette City Railway Company, which, in real life, ran from Belle Vernon down river a few miles to Monessen then across the Monongahela River to North Charleroi and connected there with the PRCo. This was a short local trolley line with actual trackage not much longer than its name. This was a sister company to the Westside Electric Street Railway which shared the same management and car barn in Charleroi and ran from Charleroi west to the coal mining towns of Bentleyville, Ellsworth and Marianna some 25 miles or so. Both these lines were often known locally as the Westside, probably to avoid spitting out that long and convoluted name of the shorter line. With our modeler's license, we run PRCo cars across the river and to Belle Vernon Terminal to meet the ME

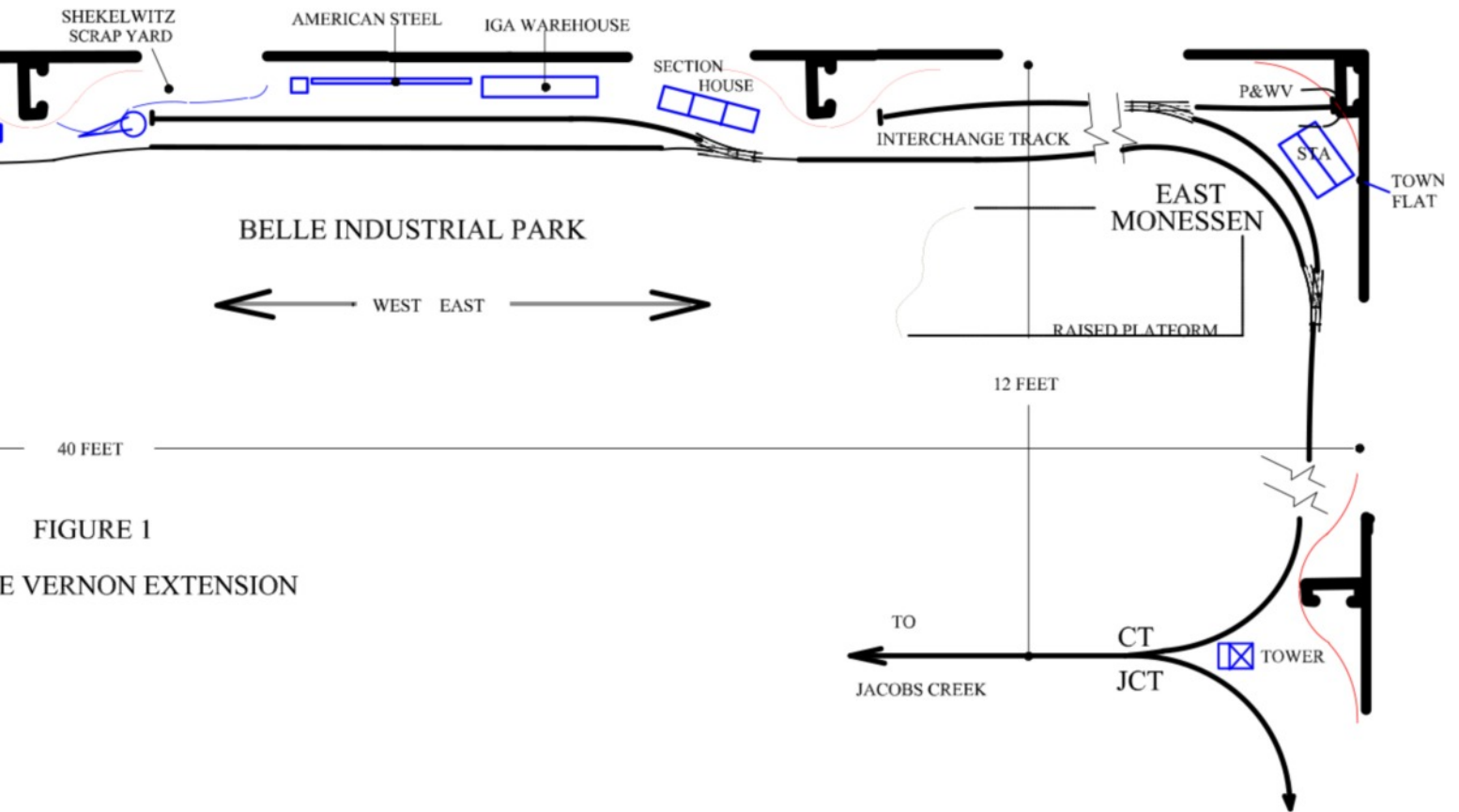


FIGURE 1
BELLE VERNON EXTENSION

Ry. This apparently did happen in real life with the PRCo providing some service over the tracks of the WMBV&FCRCo and WSSR for a period of a few years after the two other tractions lines shut down in the 30s.

As the Mountain Electric is a hauler of car load freight, it also interchanges with the Pittsburgh & Lake Erie Railroad which passed through Belle Vernon. And, the Pennsy could be reached via the P&LE a bit further south along the river at Brownsville. This was to be the second part of Belle Vernon and would be known as Belle Yard.

Belle Vernon Terminal

Belle Vernon Terminal was planned as just a tight radius loop for turning back passenger cars/trains. A siding would allow passenger cars to lay over. Eventually, the plan had this siding extended to cross the loop, run along the wall as a longer siding, and provide a place to stage and store passenger cars.

A problem was the need to access all the loop track and overhead wire for maintenance. We also needed to be able to reach the ends of the P&LE/PRR interchange tracks that are behind Belle Terminal. I sketched out the benchwork with a pop-up hole in the loop center. We could then stand on the raised walkway and reach any of the track and wire this way. The hole in the loop benchwork would make the benchwork a bit flimsy if care was not taken. The area where Belle Yard was to be located could be more conventional narrow wood benchwork resting on the plywood brackets as per **Photo 3**. Even with a very tight radius, the loop area was quite large with substantial width and sufficient support for the track loop was needed. The wood brackets would not work easily for the loop area. We decided to weld up the benchwork for the loop from some small rectangular steel tube (RHS). This would result in light but strong support for the loop trackage.

The two interchange freight tracks at Belle Yard, discussed further below, needed to sort of disappear behind the station at Belle Terminal. To keep the station from getting too high, the interchange tracks needed to

Photo 17



fall a little. Not enough to make the cars roll down to the track ends, but some grade was in order. We settled on a little more than an inch of fall on the tracks over the run of 10 feet or so. This was somewhat less than a 1 percent grade. It was a bit steep, but still workable. From Belle Yard to Belle Vernon Terminal, the main track could climb by a greater amount to add to the separation. Once the basic dimensions were sorted and plans drawn, the RHS was cut into lengths, notched as required and welded into one integral piece. Holes were drilled along the way where screws would be used to fix the steel benchwork to the wood uprights screwed to the layout room walls.

At the Belle Yard end, the steel benchwork was also screwed to the side of one of the plywood brackets. Provision was made to install a thin steel support rod between the loop and the benchwork level below should it be needed later. Once the steel framing was installed, it was quite strong and stiff, so it is not likely it will need further support. I usually put a few temporary props in place between the top and bottom level to stiffen the top level just while working on it.

Thick MDF was cut for the top of the steel benchwork as a base for the track, and the Belle Vernon terminal would be ready for track laying. **Photo 17** is the steel benchwork in place and before the MDF was installed. You are not to make fun of my welding. I don't do enough of it anymore to get nice runs. But it stays stuck together so not all bad.

Belle Yard

Belle Yard was to include a few single ended interchange and storage tracks and a few double ended sidings for making up freight trains. After due consideration to reasonable operations, five single ended interchange and storage tracks eventuated in the final design for Belle Yard as you can see in the track plan, Figure 1. Two were the P&LE and PRR interchange tracks and two for storage of ME Ry cars. No foreign, non- ME Ry cars, would be stored since all foreign cars are delivered to interchange tracks before midnight each day to avoid the per-diem charges that would otherwise result. Another single ended siding was also added at the front of Belle Yard for cabooses and work car storage.

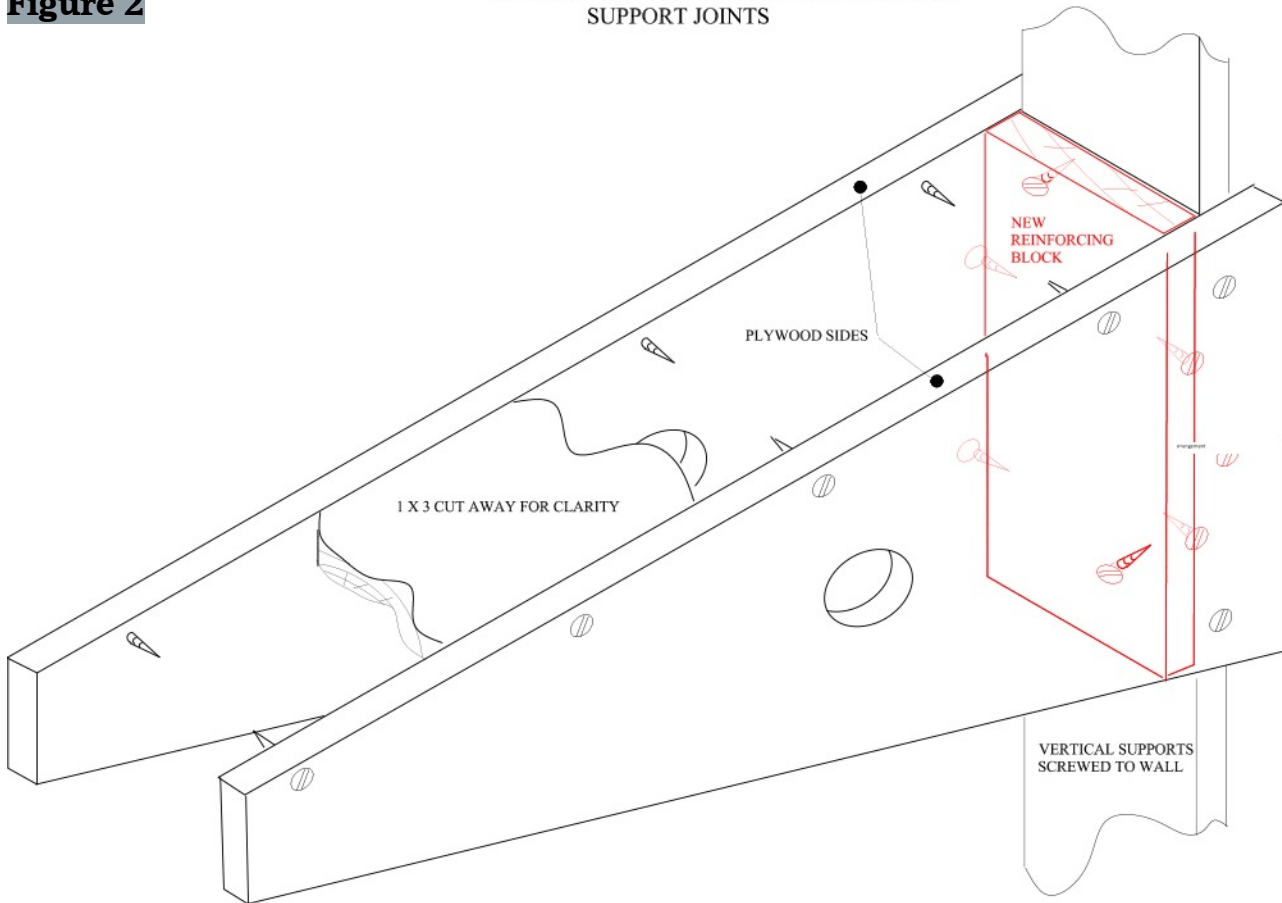
Two double ended sidings were included in the Belle Yard plan. The two were for arrival, departure, and making up east bound freight trains. A third track was the main and needed to be kept clear to allow frequent passenger traffic to pass through to Belle Terminal. It would also be the run-around track for freight motors during switching.

Since the code 148 track was on hand, it was used for Belle Yard. The readymade code 148 turnouts forced us to 4-inch track centers which was greater than really needed for traction or wanted by the initial plan. This made some of the top level benchwork at Belle Yard deeper than hoped for exceeding our top-level depth criteria. So much for planning ahead. One after-the-fact change made, because of the increased benchwork depth, was to beef up the joints between the support brackets and the vertical wall supports. We cut short pieces of 1 X 4 lumber, glued and screwed then to the face of the vertical supports on the walls, and then added additional screws through the plywood and into these extra blocks to increase the joint strength. See sketch in **Figure 2**.

One other problem resulting from the use of the commercial track and the narrow shelf was that in some places there was little room for much other than track. To have some sort of scenic effect, a rough board fence was added behind the storage tracks of the yard to disguise the transition from layout to backdrop. A few period houses were carefully cut from photos and pasted to the backdrop behind the fence to indicate a row of houses

Figure 2

FIGURE 2. REINFORCING THE BENCHWORK SUPPORT JOINTS



along a residential road behind the fence. A few trees were added that overhung the yard track and added a bit of 3D detail to the otherwise dead flat backdrop. **Photo 18** shows the fence and some of the houses. A dead tree is at the far left of the photo. This is an extreme close-up to show the detail. When viewed from a few feet away, the pasted-on houses are much more effective and clearly indicate there is something over there behind the fence.

Photo 18



As Belle Yard transitions to Belle Vernon Terminal, the track also changes from code 148, via a short section of code 125, to code 100 for the passenger loop. Why this transition was needed will be addressed next.

The passenger turn-back loop at Belle Vernon Terminal was designed with an 18-inch radius. This is a common radius for O scale traction street trackage. The very nice lost wax nickel silver street turnout components by Right O' Way use this radius. An 18-inch radius will accommodate most any O scale traction cars, even coupled in trains with radial couplers. The loop will accommodate traction freight cars with radial couplers, but steam road cars cannot operate around this tight radius.

Rather than wrestling with 3 feet lengths of store-bought track for this tight radius, or hand laying the loop, we bought some 18-inch radius curved code 100 sectional HO track. Some of my ideas don't work out as well as expected, some are outright disasters, but using the reworked HO sectional track here did work OK. I cut the ties in their center, epoxied each rail with its short half ties down separately, and re-gauged the track to O. Most rail joints were soldered with just a few left for expansion and contraction. A code 100 guard rail was installed inside the inside curved running rail as was usually done on prototype traction lines for tight radius curves. Some spikes were added to the running rails to ensure the glued down sections could not creep and change the track gauge on me later. Now you know why the code 148 rail transitioned down to code 100 approaching the loop.

Turnout Dramas

In a futile attempt to save some modeling time, we decided to use turnouts for the loop and the lead to the PRCo interchange/staging sidings that were code 100 Lima ones with 24 inch radius. These work out to about the equivalent of something like no. 3.5. They have curved frogs and use space quite effectively. They certainly would be useless for most O scale applications, but my thinking was they might be good for traction. They came from EvilBay as usual. We removed the switch control parts, painted the ties a dirty streaky grey, painted the rail brown and, once ballasted, they should look OK..... Hopefully.

Loose trucks of different sorts were used to test during track laying and all worked well enough. But when pushing a string of cars through the Lima turnouts, all sorts of problems were encountered. I thought a few adjustments would make the Lima turnouts usable.

The plastic guard rail on the inside rail of the diverging route was cut off and replaced with a much longer one made from some code 100 rail. The gap between the old guardrail and the running rail in the turnouts as they came was right on the maximum allowable according to the NMRA gauge, so it was not too wide technically. But it was wide enough that it wasn't really doing much to guide the wheel sets. This new guard rail extended from the heel of the point and throughout the entire curve. The tight 24-inch radius curve would benefit from this longer guard rail, so we thought. This was often done on prototype traction turnouts as well by using girder rail for such areas, or a second length of rail as we did. The new guard rail was installed to a



Photo 19

a reasonable tight, but allowable NMRA gap, using spikes. The thinking here was that the guard rail gap on the tight side should keep it in contact with the back of the inside wheels and better guide the outside wheels through the frog. Using such guard rails was not just a traction thing. Steam roads used them, too, particularly on tight radius curves in industrial areas. See **Photo 19** of such continuous guard rails on both the inside and outside rail of an industrial siding in Pittsburgh. This is probably some P&LE track, but it could be Pennsy.

Another adjustment tried was to cut small triangles from black sheet styrene and fit them into the deep plastic frogs to keep the wheels from dropping excessively when passing through. The serious bouncing of the outside wheel of the truck when passing through the grossly made frog could result in lift on the wheels on the inside and exacerbate the first problem above.

We were still having problems with car trucks derailing when traveling on the diverging route. For one thing, we discovered the track gauge was a bit wide in a few places through the turnouts when checked with an NMRA gauge. Quite a few spikes were added to tighten the wide gauge as required

By the way, the plastic Lima uses to make these turnouts is some strange stuff. It initially seems to have about the same texture as very cold chewing gum. After a few strokes of a Zona saw it warms up and then has the texture of fresh chewing gum mixed with kryptonite. Quite nasty and difficult to cut through. I tried to use a combination of knife, Zona saw and Dremel saw to get through the stuff. Finally broke out a wood chisel and bigger hammer. In O scale, a bigger hammer solves many problems. I remember the peanut gauge fellows once referred to us as blacksmiths.

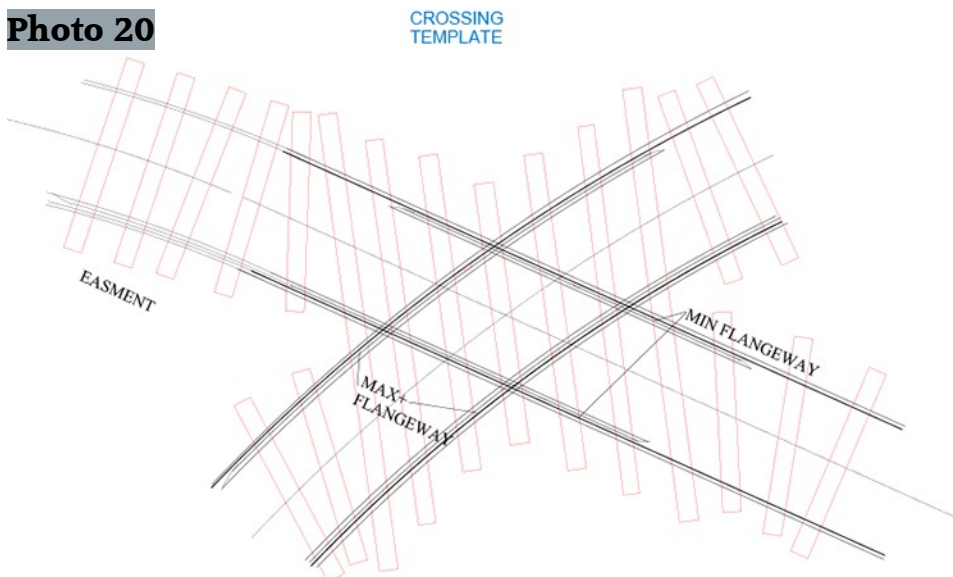
After all this, the bloody turnouts were still causing me issues. We pondered tearing them out and installing hand-built number 4s using our Fast Track jigs. The larger No 4s leading into the tighter radii of the following track would provide the equivalent of nice easements. But I thought we would try one more time to sort out the issues. We spent another rainy afternoon tinkering with them. Close examination with a low light and a straight edge uncovered a hump and dip in the rail near the frog of one turnout. This was taken care of with a file and shims. Finally, we re-worked the long guard rails I had earlier installed by loosening the spikes and inserting card shims under the guard rails to raise their top above that of the running rails. I rechecked the gauge and added some more spikes here and there as well. Finally, the turnouts were performing satisfactorily. The extra height of the guard rails must have made sure they were now in better contact with the back of the wheels and guiding them when the wheels on the other ends of the axles were passing through the ugly frogs. Probably would have saved quite a bit of time if we built these turnouts from scratch to start with.

Building the Crossing

One other track item needed from scratch was the diamond where the lead to the PRCo interchange/storage sidings crosses the loop. Here the straight part of the lead cuts across the 18-inch radius loop, all in code 100. Just after the lead crosses the loop, the straight track changes to a short easement headed for a turnout that provides access to the two sidings. This crossing in traction talk is “special work” as no off-the-shelf crossing will work here. The crossing angle was the equivalent of about 55 degrees. I suppose we could have fiddled the

track alignment a bit and used a standard 60-degree crossing. But, having straight track on both legs of the crossing would have required a fair bit more layout area for the loop than wanted on this cantilevered top level.

Photo 20



To build this diamond, we first drew the two tracks and then printed the drawing in full size as you can see in **Photo 20**. It would be better if we could spell “easement”. This was cut out and mounted on an appropriately sized piece of 1/8 inch thick MDF with white glue. The red lines on the drawing are the tie

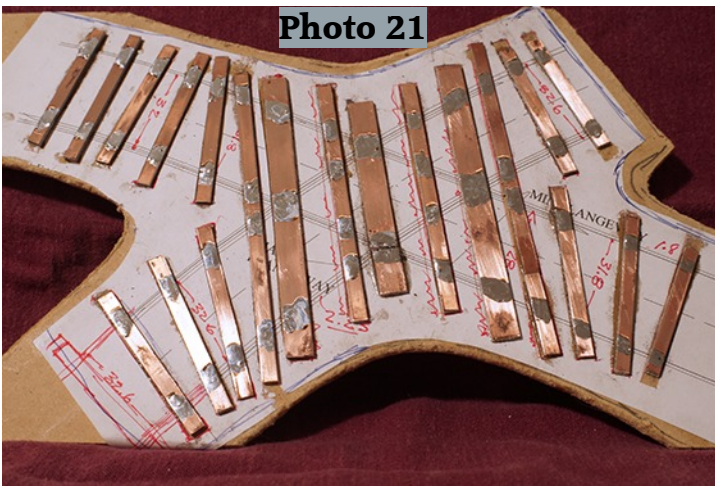


Photo 21

positions some of which required moving to get them under all the points where rails intersected. The tie areas were cut out of the drawing and the PCB ties then epoxied directly to the MDF. This will yield a better bond than epoxying the ties to the paper. In **Photo 21** you can see the ties all in place, and the areas where the rails are to go have been cleaned, tinned and ready for rail. Several wide ties are used directly under rail intersections. Prototypes often used larger ties in strategic places in both crossings and turnouts as well.

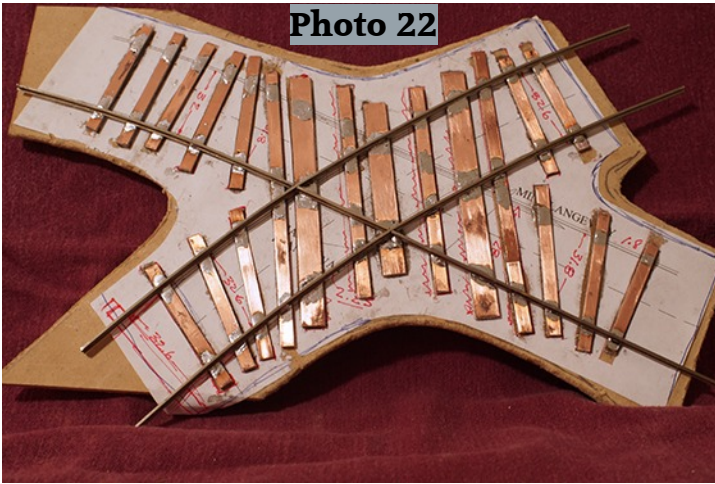


Photo 22

To build the crossing, the approach suggested by the late Paul Mallery, who authored many excellent how-to-do-it books for the hobby, was used. He was quite skilled at trackwork. His *Trackwork Handbook* is a valuable tool for anyone building a layout and I recommend it. The book addresses benchwork as well as track so is a good read and good advice. It was published in many editions over quite a few years since the 60s, but it just as relevant today. Carsten Publications, *Model Railroad Craftsman*, published it last, and it is readily available on used book sites. I have seen it on the EBay rail book list regularly. It may also still be available new from White River Productions, the firm that took over MRC when they went belly up, but I did not see it on their website book store when looking last.

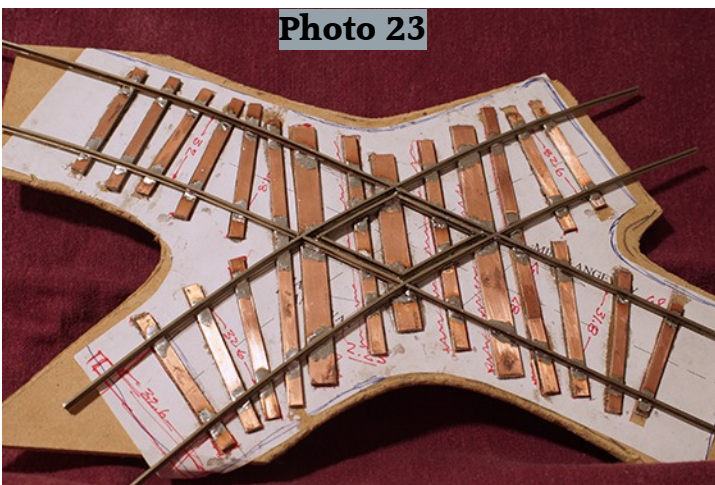


Photo 23

Additional **photos, 22 through 24** provide more detailed views of the steps in the crossing construction process. In the first of these you can see the primary route's curved rails have been laid, and then the three pieces of rail that forms one of the straight running rails for the other route have been cut, filed, fitted and soldered into position. Pre-curving the rail to the 18-inch radius is essential so the solder joints are just holding the rail down and are not in stress from holding the rails in position laterally as well. The bottoms of the rails were cleaned and tinned, too, and soldering is then quite quick and easy.

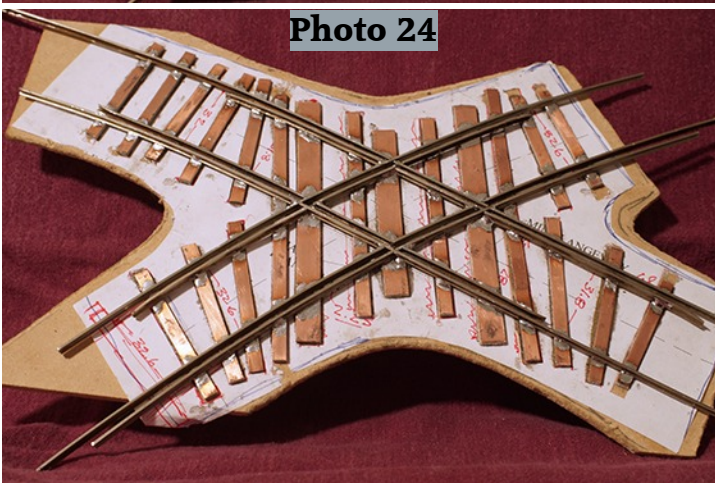


Photo 24

The curved route was considered the primary one since curves are more prone to derailments in turnouts and crossings and easier to lay accurately if done in one piece. The straight rail pieces can be exactly located with the help of a ruler. Such a ruler cannot help much in piecing together curved rails. The straight rail is easily laid by placing the two pieces of rail outside the diamond first then fitting the third piece inside the diamond to align with the other two using the ruler.

In the next photo, the second straight running rail has been gauged off the first and soldered in place. The guard rails inside the diamond have also all been cut and trimmed to fit and soldered in place.

In the third of these photos, the guard rails outside the diamond have all been added. Prototype traction, and even steam road, trackage often had a guard rail inside the inside running rail for the whole of a tight curve or loop. We did this as well on all the 18- inch radius track. When looking at this photo, one guard rail, right side of photo, appeared closer to the running rail than the others. I rechecked this with NMRA gauge and found it to be a little tight so reworked it back to spec.

The last construction step was to cut the flangeways into the running rails in 8 places – 2 at each corner of the diamond. This was done with my Dremel working carefully to avoid cutting too deep or cutting in the wrong place. The inertia of the spinning armature in the Dremel can make it more difficult to maneuver with accuracy unless care is taken. The new flangeways were cleaned up with fine needle files to remove any burrs and dags. You do not need to cut all the way through the rail when providing flange ways. The flange depth for O scale is less than 1/16 inch so the cut can be just that deep. Leaving the metal and the solder below the cut will help keep the frog joints strong.

A few different trucks were used to test the crossing looking for bumps, jumps, and other impediments to smooth operation as well as any tight or loose gauge points. Coupled cars were pushed through as well to verify the crossing was working satisfactorily.

A traction crossing is not as heavily constructed as is a steam road one. The rail arrangement is a little simpler as easers on the outside of the running rails are generally not needed nor included. The inside guard rails are definitely helpful however.

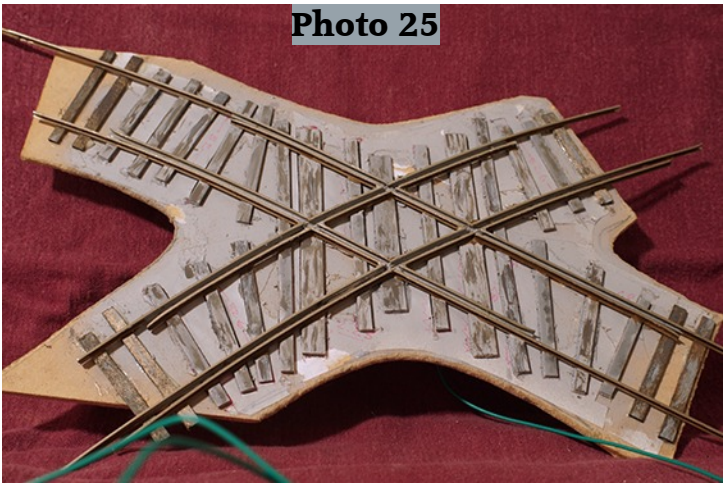
The straight track through the crossing was laid to a tight NMRA gauge and the sharp curve to a wider gauge (approx. +7 thou over the max NMRA width or 1.285 inches). The flangeways were also varied with those through the 18-inch radius curve just a little wider (0.088 wide which is +7 thou) than the NMRA maximum width. These change to the NMRA standard should reduce the tendency of O gauge flanges on longer wheel base trucks to pinch on such a tight radius. The notes on the drawing are metric if you are trying to work them out. We are technically in a metric world down here, so finally tiring of working back and forth between the two systems, I use it mostly now.

Laying this bit of special work on PCB ties instead of wood ties should mean no maintenance will be required in the future.

You might notice that my crossing does not include the traditional cut lines in the copper foil on PCB tie tops to isolate the rails. This is not required when using overhead for the power supply on traction layouts. For steam or stink buggy use, the cuts will be required. And the rail around the diamond will need to be cut as well. For traction, I just had to solder a wire to the top of one PCB tie near a rail, and run it through a hole in the MDF base to provide power to all rails of the crossing. For a steam road crossing, you will need several jumpers to route power to both rails and to jumper around the cuts in the rails.

Painting the whole assembly with a medium grey gets rid of the white printed diagram and covers the shiny copper PCB ties and makes them look more like prototype ties. Before painting, I pulled off some of the white paper that was not well stuck down. This avoids the tendency for loose paper to bubble when hit with water-based paint. The grey was darkened a little with a few drops of black and a few ties brush painted over to provide some darker ties. Some darker grey was dry brushed on the ties to add streaks and get more of a “wood” look. With a bit of care, you can get the PCB ties, and plastic ties on commercial track for that matter, looking quite realistic. Some brushed on rail brown takes care of the nickel silver rails. Rail tops were cleaned of paint and gunk. Some wood ties were added at the ends of the PCB tie runs. We did not spend a lot of time on the color of the ties for this crossing as it is 72 inches above the floor and well away from prying eyes. No

Photo 25



point in spending a lot of valuable time modeling something that cannot be seen. **Photo 25** shows the crossing after painting and ready for the layout. Some spikes will be added in the real wood ties when installing the crossing on the layout.

Ballast finishes the crossing and the less than prototype depth of the PCB ties is not all that apparent. **Photo 26** shows the crossing in position on the layout.

By building the crossing on the thin MDF, the job can be done at the workbench. Then the crossing can be glued and screwed down in position on the layout and the adjacent rails shimmed up to align vertically.

Photo 26



Using this step-by-step approach of Paul Mallery allows a modeler to build a crossing of any sort, and most any angle, that will operate as reliably as will any ready to run one. Not difficult to do, just takes time and patience. Such trackwork is a good easy project for practicing soldering skills before you tackle a car or locomotive, also.

One thing noticed when testing the extension track was that fine flanged wheels did not perform well on the coarse ready-to-run turnouts. I have some cars with fine scale PSC spoked wheel sets. They work fine through scratch turnouts, but certainly don't like the Atlas code 148 turnouts. I really like spoked wheels, but will need to change these out in the interest of reliable operation. We need to look around for some more useful spoked wheel sets with standard NMRA flanges, I guess. Anyone know where I can find some?

Testing also discovered that some nasty bugger sold me P48 trucks! I had pulled them from my truck stash and put them under a car and, of course, they did not do well on 5-foot track. Checked them with an NMRA gauge found the problem.

Structures for the Extension.

We had previously worked out a rough idea for the Belle Vernon interurban station during another thinking and drinking session. It was to be a largish and impressive structure serving four area traction lines, but crammed into a small space. How's that for a dichotomy?

With quite an assortment of structures already built that have come from several layouts, we spend quite a bit of time trying to find a home for them to avoid building a new structure unless it is absolutely essential. It was definitely essential to build the Belle Vernon station from scratch as it was on a tight curve, and wedged between the track and the backdrop here.

And, we had to get busy and build the Belle Vernon station as it was needed to support some of the overhead wire. From the initial crude sketches on bar napkins, the details of the station at Belle Vernon were further refined. After more detailed sketches, the walls were drawn and cut from some 1/16-inch-thick card. I usually work in 1/8 inch thick MDF for building carcasses, but, since the station was to have a pronounced curve in it, I switched to thinner card for this building. Tabs and slots were provided, and with wood strips glued inside corners and in strategic locations, the card when well glued together will provide a sufficiently strong carcass for the building. This also takes into consideration that once it is completed and installed on the layout it would not be further handled. As the span wires for the overhead were to attach to the building in several places eventually, these areas were well reinforced. **Figure 3** is a sketch of one each of the card parts for the station. And **Photo 27** shows the card carcass after it was knocked together and while being test fitted in

Photo 27



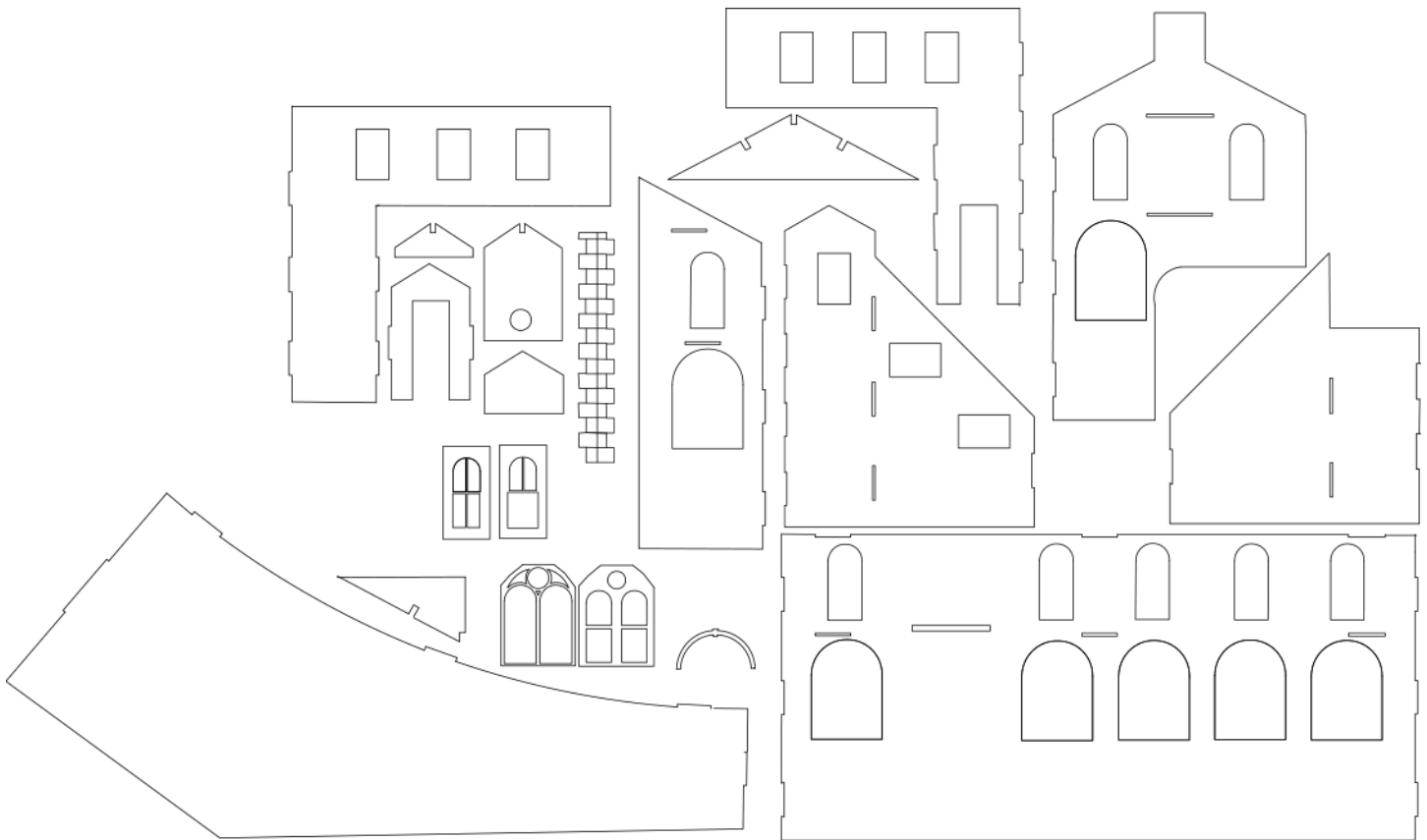
place on the loop. You can see here how the east wall of the station, to the right, was cut away at the bottom to clear cars, and overhead wire on the P&LE and PRR interchange sidings that sort of disappear behind the station.

A heavy base was made for the station from some on-hand $\frac{3}{4}$ inch thick wood material. A thick base will allow me to screw up and into the base from under the layout and get a firm anchor needed to withstand the strain of the span wires that will attach well up toward the top of the building.

Windows in the main building were several layers of card glued together, painted, glazed then installed on the inside of the building walls. A translucent “glass” was used as we had no plan to add any interior details. My “glass” was just some clear plastic with some translucent paint on the inside. You can see the window layers on the card sheet in **Figure 3**. Some internal walls were added so that interior lights would not shine through all windows. We also included a back over the lighted areas of the station to ensure the light would not reflect off the backdrop just behind the station building.

Figure 3

Figure 3 Station Card Parts



A stone retaining wall was desired under the station to contrast with the drab brickwork. Some of the Chooch flexible stone sheets were ordered to try it. Having never worked with this product before, it was a new experience. The color as received was not to my liking. I reworked the color by over painting with a dilute brown, then touched up stones at random with several greys, a lighter brown, and some depot buff. When dry, the sheet was hit with my do-all black shoe dye diluted in wet water – same stuff used for rock castings. The color was somewhat improved. The flexible stone sheet cut easily and was easy to form to the curve of the building. A good acrylic contact adhesive was used to glue in place. The sheet was not long enough to reach from one end of the station to the other, so we just made a straight cut and hid it behind the covered walkway out of view. Later, the retaining walls on each end of the building will be added using the same Chooch material when fixing the building in place on the layout.

The stonework was cut to size taking advantage of the interlocking features on the ends of the sheet to mate at the building corners with the end wall also being cut from the stone sheets. As the wall continues into the retaining wall, the interlocking ends can mesh to provide a neat joint.

A concrete retaining wall section was added to the left of the station just to have some variety there.

Quoins are the architectural features at building corners, and sometimes around windows and doors, that appears to be stone blocks. It is often thin bits of man-made stone mortared to the face of brickwork. Sometimes it is actual stones on older buildings that were worked into the brickwork bond. We added these again to dress up the drab bricks. They were cut out from card then heavily scribed down the middle and bent at 90 degrees. When bent, a large groove appears along the bend line. This will be filled later. The quoins were pre-painted the brown used for building trim on the Mountain Electric. We did not paint the groove down the middle that formed when the corners were bent into shape. The quoins were installed on the building corners. Then some wood filler was worked into the groove to build up an outside corner and fill the groove. Two coats were needed due to shrinkage. The back side of a modeler knife was used to re-scribe the cut lines between the stones of the corners due to the wood filler closing them up. The brown paint was then touched up. Doing the pre-painting kept me from smearing the brown all over the adjacent bricks if I tried to paint the quoins after install.

The enclosed walkway over the track and down to the platform was also drawn and cut from card and covered with styrene novelty siding. This will contrast with the brickwork of the main building and indicates a later timber addition to improve the convenience and comfort of passengers headed for the cars. Grandt Line plastic windows were used on this addition.

The waiting platform was cut from thin MDF sheet and then covered with embossed brick sheet. These bricks were well weathered with a black wood filler to produce very dirty bricks with black in the joints. Wood strips were painted “aged concrete” and used to frame the platform brickwork with concrete curbing. When the platform was finally installed, the enclosed walkway was raised to near its correct height to align with the main building.

When test fitting the enclosed walkway after it was painted yellow, it appeared really bright and dominated the view. The covered walkway looked like some electric alien monster was attacking the main station building. The bright yellow needed to be toned down a bit. But, since my railroad structure colors are yellow with brown trim, we needed to stick with these. Weathering the yellow dulled it somewhat. We gave the yellow some grey streaks in the direction of the siding to look like the paint had weathered a bit. Brown chalk was applied in a vertical direction at the rows of nail holes to accentuate them and add some vertical streaks. Other vertical streaks were added at window corners. And the brown trim was applied liberally to the large yellow walls to help reduce the visual impact of the yellow. The wainscoting on the bottom of the walls was made from some 20 thou thick styrene grooved siding to further help tone down the yellow.

The sub-roof of the station was modeled using several layers of thick card. Wood strip was used to edge the card. The underside of the overhang was painted the standard brown trim color. The roof covering was modeled as slate which was common on commercial buildings in the area. We make slate the same way as wood shakes, but with more evenly spaced cuts as slates were not of random widths as were shakes. When assembled, the roof was painted several shades of grey then weathered a little. And the roof of the covered walkway and platform was modeled as slate too.

Getting the roof of the covered walkway to fit against the main station building was a bit of a fiddly task. After about fifteen measure and sketch tries, and not being able to convince myself the fit was correct, we went to Plan B. We shimmed up the covered walkway to a level higher than it would be on the platform and worked out the roof fit. Later we would make a thin foundation to go under the footprint of the walkway to close up the gap. This actually accomplishes several things. It keeps the wood siding of the walkway up off the brick surface of the platform which certainly was essential for the prototype. And the platform is on a slope so this allowed

me to compensate for that by putting a taper on the bit of foundation under the walkway to avoid the need to try and taper the bottom of the covered walkway. Additionally, the foundation was well glued to the bottom of the covered walkway to ensure internal lights would not shine out from under it. The foundation was cut just a tad smaller than the footprint of the walkway, the taper was added to accommodate the fall of the platform, and it was painted concrete color to appear to be a concrete foundation. On the low side, the foundation extended out from under the door there and formed a step for the entry/exit doorway.

We made two chimney pots to put on top the chimney. These were common in olden days and probably a hold-over from English inspired construction techniques from the colonial days. The chimney pots dressed up an otherwise bland looking chimney.

Lighting was by LEDs. Better than bulbs as they rarely burn out. An LED was also installed under each open train platform and had their wires running back into walkway and down through a hole in the platform. In several of the station construction progress photos ,you can see the copper whiskers sticking out of the covered

Photo 28



Photo 29



walkway that will be routed to LEDs under the platform canopies later. The walkway over the track was similarly lit. Some areas of the main building were lit and some not lit. Some platform furniture and waiting passengers completed the scene.

Photos 27 through 31 show progress shots while building the station. The second of these photos was after the brick sheet had been applied. Others shows the brickwork after mortar was applied and the shell of the timber walkway over the tracks and down to the platform has been placed temporarily as a test fit. You can see the walkway over the tracks and down to the platform seem to be out of level. In the earlier photos you might note a modeling tool wedged under the west end of the station to level it. The loop track is on a downgrade so some leveling of buildings was needed. **Photo 31** is after the windows were installed and wainscoting was added at the bottom of the yellow walkway and stairs. Some weathering was added, too. In the photo, the grey appears as white though.

Photo 30



Photo 31



The pictures of the station during the construction process are provided as sort of a photo essay to help you understand how easy it was to build such a building in hopes you will try the same. A train station was, in the good ol' days, often a substantial structure and a statement of the importance and the status of the community in the eyes of a railroad. Sometimes, when extending service to a new community, the station was built grander than required in anticipation of the future business to be won there. You should have at least one such major station that fits that mold on your layout.

About this time we had another thought: "How can we be at Belle Vernon if there is no Belle Vernon?". We needed to model the town of Belle Vernon in some way. The station just sitting there all by itself was not going to look that convincing. And, something was needed on both ends of the station building to disguise the transition between the truncated station and the backdrop.

Photo 32



To interchange with the P&WV, back up the line at East Monessen, the rails of the Mountain Electric were high above the river. See **Photo 32** which shows the prototype P&WV crossing of the Monongahela River with Charleroi on this side and Monessen, and Belle Vernon, on the far side of the river. You can see the P&WV is well up the hillside. The track below the bridge on this side of the river is the Monongahela Branch of the Pennsy at river level. I have no idea who took this photo, and wish I did to provide a proper credit. It has been in my collection for many years now. But, whoever it was, took a great action photo of a rarely photographed and poorly documented line. The P&WV was a

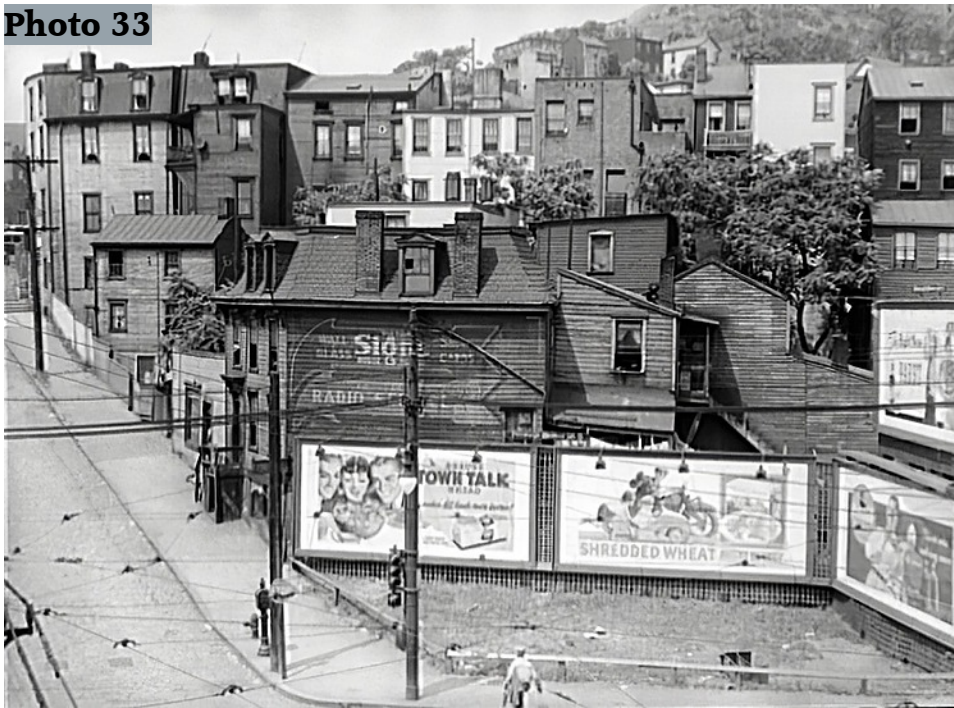
fantastic small, but still big-time, railroad. The photo would date from the late 30s to very early 50s as the P&WV was an early convert to stink buggies, scrapping these beautiful mallets long before they wore out with only 15 years of service. They were the first locomotives built to the 2-6-6-4 wheel arrangement in the 1930s.

The Belle Vernon interurban station would be much lower in elevation than East Monessen as the Mountain Electric interchanges here with the P&LE and PRCo, both of which are near river elevation. And the town's business district would extend to the interurban station. This is unlike East Monessen where the station there is in a lonely spot well above the town and you can only get a glimpse of the river town of Monessen down the valley.

I decided to include a view of Belle Vernon buildings on the backdrop. There was no room for even building flats near the station, so just some building photos pasted to the backdrop would have to do here. What I finally decided was; to the right of the station, or east, to have buildings that are sort of lost in a haze; and, to the left of the station, rear views of rather drab commercial buildings such as might face tracks, but these could be larger and clearer to indicate closeness as compared to those on the right.

Have a look at **Photo 33** which is an old view of a Pittsburgh neighborhood. But it looks more like a model done with building flats arranged one over the other I reckon. Although a prototype photo, by an unknown photographer, many of the buildings have very limited apparent depth to them. I decided to strive for this effect,

Photo 33



but with a little more commercial orientation, for left of the station. I tried a few combinations of photo layers to achieve this, but was not pleased with them. Finally, we settled for a single row of building backs. I do wish we could have found a way to emulate **Photo 33** though. We will try to do this later in another location when we have a little more depth to work with. The technique should be more effective if the various layers of buildings can be mounted on card or thin MDF and spaced one from the other just a little.

It required a bit of trial and error to get these building photos correct. As said before, I ain't very

artsyfartsy. Getting such scenery stuff right, sorting colors, achieving some perception of distance, depth, etc., is hard work which takes a few goes to get it to look better than the dog's breakfast. After searching my building file for ideas, some building photos were found, printed and carefully cut out.

An early trial revealed the cutouts to be too large. They were printed to a reduced size, and a later attempt looked better. We sprayed the photos well with a flat sealer so the print ink cannot run if any water would get on the backdrop from scenery work. After finally deciding they were OK, they were glued to the backdrop. A row of tree tops was painted on the right side of the station along the bottom of the cutouts and on the backdrop to blend the pasted-on building photos with the scenery.

One change needed along the way was to rework the initial painted backdrop. Just to the right of the station was a hill originally in quite bright green paint, to represent a close hill. This needed to look more distant. I repainted it with grey mixed with the green to dull it and add more perception of distance. When the building cutouts were glued over it, the hill looked more realistic than having the backdrop building over the greener close-up hill. You can see some difference when comparing **Photo 27 and Photo 28**.

Photo 34



As you can see in back in **Photo 17**, the MDF backdrop had stopped. We had to extend the backdrop to get well past the station area, prime and then paint the sky and hills before the station area was completed. You can see in station progress photos that this has been completed.

Various billboard arrangements, and other wilder schemes, were tested to help disguise the awkward transitions between the ends of the station and the backdrop. One idea was to stack one billboard on top

Photo 35



another. A train modeler friend was around to visit and saw some of my trial fits. He said that full size billboards were never stacked one above another so I should not do that. **Photo 34** shows something that never was, obviously. I am always hesitant to use the words “never” and “always” when modelling as the old saying “there is prototype for anything” is pretty much true.

After several attempts at stacking billboards two high, we went back to a single billboard above the retaining wall on the right end of the station though.

Trees were placed to mask the west end of the station where the depth is only half the building. A fence was added on top the retaining wall so visitors to the park-like area would not fall onto the track below. We had planned to have a billboard just to the left of the station as well. We could not make it look right, so moved it well left of the station to help disguise the pasted-on building backs there.

Photo 36



Photo 35 shows the finished Belle Vernon station with a lighted sign advertising the four traction lines using it. To access the tracks, our passengers walk from the station building through the pedestrian walkway over the loop track and descend to the tracks via

stairs. Cars can be spotted on either the loop or the siding for passenger loading. There is also an elevator in the vertical tower to allow LCL freight and baggage to be efficiently taken down to the departing cars. Passengers can use the elevator as well if they are too lazy to use the stairs. Baggage carts can be loaded in the station and pulled through the pedestrian walkway over the track to the elevator as well.

Most Mountain Electric local offices are in the Belle Vernon station, but a few other support buildings were squeezed in where limited space allowed. A crew rest facility was provided by locating an old boxcar body at the east throat of Belle Yard. This was an old tinsplate Plasticville building that had been reworked and weathered and has been on several narrow-gauge layouts over the years. See **Photo 36**.

A yard office for the yardmaster and his car accounting clerks, who keep track of freight car routing and billing, would be another nice addition. In my hoard of old buildings, we had one that had been the office for a

Photo 37



logging company. This was recycled into an available space in Belle Terminal for the yard office.

A few maintenance shacks were placed along the front storage track to service caboose and work train cars. A section house for the local track maintenance crew was also provided near the Belle Industrial Park as you can see in **Photo 37**.

While looking at progress on the extension one day, we concluded there was an awful lot of flat track without a break. We decided to put in another culvert

under Belle Yard. Modelers build bridges very often, but rarely build lowly culverts. The prototype had many more culverts than bridges, so more should be worked into our layouts I reckon.

Just near the west end of Belle Yard two low hills met on the backdrop. There would have been a gully between these hills, and some civil engineering would be needed to route the water that flowed from the gully away from the yard. How our culvert was made is the subject of the sketch at **Figure 4**. Many of the culverts on the Mountain Electric are just pipes under the tracks. In the interests of diversity, we decided on a box culvert under Belle Yard. Prototypes used many of them. Often such box culverts were just wood piles on each side of a narrow channel under the track, caps of 12 x 12 or 10 x 12 lumber ran over the pile tops, and floor beams, stringers, were added to carry the trains over the gap. This is really just mini-trestle construction.

Figure 4

THE BOX CULVERT UNDER BELLE YARD TRACKS

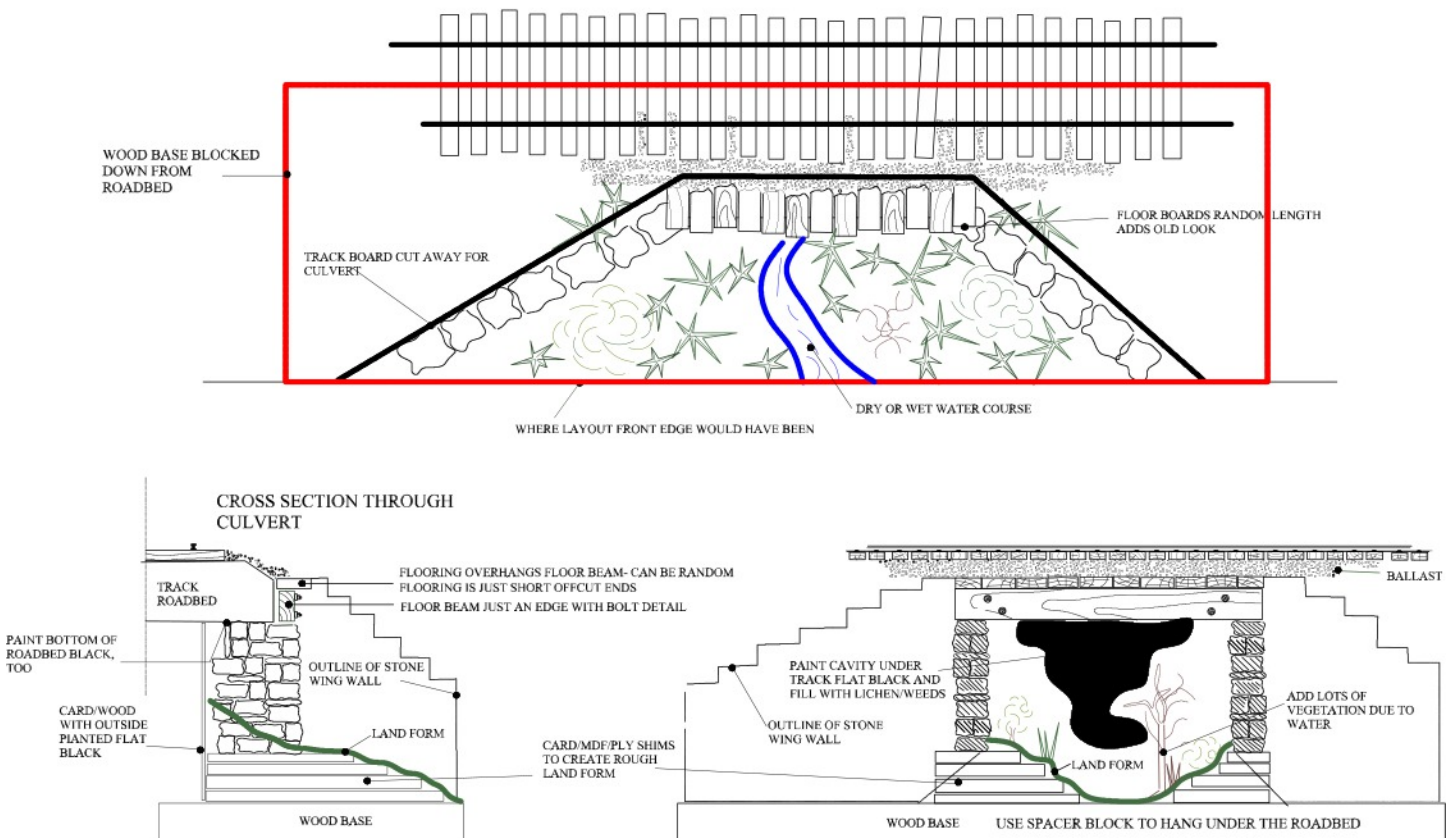


Photo 38



Photo 39



Photo 40



Photo 41



Sometimes bridge ties were spiked down to the floor beams and sometimes a wood floor was constructed over the floor beams using some 3 or 4 inch thick boards. On top the floor the ballast was laid and the track constructed as usual. Some box culverts had stone walls built along both sides of the water channel as we have modeled ours. Either system was as common as chips so you can take your pick if you want to build one.

The width of a water channel would be 10 feet or less. If much wider, a bent would have been added in the middle of the span. Width of the channel was determined as a function of the expected water flow. If substantial, more of a trestle might be needed. But most such small culverts were in the 6 to 10 feet width and about that same height.

My stone work for the culvert was of individual stones. You could use some stone sheet material such as that made by Chooch if you prefer. Or you could model concrete or brick walls. Timber was also quite common for the entire structure in the early days to include the wing walls. And if the flow was down a fairly steep slope and there was not expected to be any pooling or swirling of the water, the wing walls might not be needed nor included.

Photo 38 show how the layout edge was cut out for the culvert with the supporting wood base blocked down about 2 inches under the plywood. Just some scrap ply and lumber was used for this. In **Photo 39**, you can see the card has been installed and painted black and the land form has been roughed in using layers of corrugated card cut to shape. In **Photo 40** the stones have been laid and some wall board setting compound has been troweled over the layers of corrugated card to smooth out the land form, The floor beam and the ends of the floor boards are in place. Some newspaper has been cut and is being glued between the back of the stone walls and the layout to shape the land as it falls away toward the wing walls.

One minor irritation we noticed after completing the culvert was it is just where we needed to place quite a few turnout control rods. So much for planning ahead. With the fascia in place, the area looks reasonably finished now. **Photo 41** shows the completed box culvert. You can see the ballast above the floor boards, the slopes to the wing walls have now been scened, and lots of vegetation included in the dry water course to disguise the black cardboard. The

stone work has been weathered with our do-all black shoe dye in alcohol. We still need to paint the fascia and install the control rods in the turnout control holes. Looks like the track gang needs to get the lead out and clean the culvert before the next storm season.

The Pittsburgh Railways Interchange

The tail of the passenger layover/PRCo staging siding was originally to be a single track. In working out the operational scenario, two tracks seemed better and we provided them. The idea here was to park passenger cars and trains without needing to man-handle them to and from a staging area, and two tracks would better meet this objective. Trains, like the 6 night a week Pittsburgh sleeper, will need to lay over quite a while as it supposedly ran the 90 or so miles to Pittsburgh and back. Having the two tracks would also mean a few interurban freight cars, to be interchanged with the PRCo, could be accommodated as well.

We made the radius of the siding leading off the turnout and to the storage/staging area 24 inches. All freight cars interchanged with the PRCo are interurban cars with radial couplers. The 18-inch radius of the loop track, in theory, would be sufficient for the siding as well. An 18-inch radius works very well when cars operate through the curve by powering forward. But since interurban freight cars would be pushed onto this storage siding, and passenger cars backed, I thought it best to make the radius larger to increase reliability.

Using the new sidings for PRCo bound freight cars also means the interchange tracks behind the station can now be segregated into one for P&LE and one for PRR. This should make finding interchange cars from these lines easier and faster.

The initial plan for the passenger layover/PRCo staging sidings resulted in a sharp “S” turn after the turnout that split the siding into two tracks. Since we would be shoving cars into these sidings, we switched here from a sharp turnout to one with a smaller frog angle. This made the turnout longer and ate up some space, but it would increase reliability here. This change basically eliminated the usually problematic “S” curve.

The newly selected turnout was code 125, so the track for the two staging sidings was also laid with some on-hand commercial code 125 track. Of course, just like the other turnouts we used for the loop and layover siding, this turnout was out of gauge as well, which we discovered after installing it. That meant we had to stand on a ladder and re-work it to get it gauged and usable. At least we discovered the problem before hanging the overhead wire! The control rod was extended a good distance so that this turnout could be operated without the need to duck into the access hole in the loop.

The buildings behind the PRCo staging sidings were done as a collage of three rows of paper cutout of suitable buildings. There was a little more room here so we tried the technique discussed earlier and illustrated by the prototype photo in **Photo 33**. Each row was a strip of 1/8 inch thick MDF cut to the profile of the building tops. One row was glued over another and all were then glued to the painted backdrop. A fence at the joint between the layout and backdrop completed the scene here. We tried something else new here as well. Just behind the fence and between layers of buildings are a few trees. These we made of clear plastic cut to a ragged shape, The face of the plastic was painted as a tree. The plastic was glued between the MDF layers and results in some see-through effect as does a real tree.

And, we thought we could spice the area up a bit with concrete and timber cribbing retaining walls below the staging tracks.

One of the two tracks was intended to represent an interchange with the PRCo that went off to Charleroi and eventually Pittsburgh. For this track, the overhead wire was attached to a tension spring and screw eye in the backdrop. We hid a small block of green dyed foam rubber at the track end to deal with any cars that were sent screaming down the interchange track. The other track, the storage siding, ended with a bumper made of a few ties. A line pole to which the overhead wire was to attach was also at the end of this second track. We had a

minor worry that a car sent screaming down this track could dislodge the bumper ties, hit the pole, and then turn sideways and head for the layout room floor. To help us sleep at night, we added a timber fence along the top of the timber retaining wall to catch any such errant car. And we included some scenery to help hide the end of the interchange track. **Photos 42** and **43** show this area when completed.

Variety suggested a mix of cinders and slag ballast for Belle Vernon Terminal and Belle Yard. The main tracks into and through the yard were ballasted with crushed slag and the lesser sidings and the loop cinders. Slag ballast on the main makes good sense since this line to Belle Vernon sees heavy traffic and has been rebuilt by the Mountain Electric. The storage siding for work and caboose cars was just mostly weed grown dirt.

Photo 42



Photo 43



We even transitioned from ties down to the plywood without ties on this storage siding to add to the “track down in the dirt” look.

And, we needed to disguise the cut HO ties on the passenger loop, so track there was well ballasted with cinders and grass which hid the HO tie spacing and missing bits in the centers from the gauge widening.

Ground cover, some bushes and trees, and grass were added in spurts. When not busy with some other tasks, we plant more weeds, bushes and grass here and there all along the extension. This will probably be a task that will continue for some time as the more you add, the more realistic the scene will look. Such a task is rarely ever finished.

Assembling the Static Grass Applicator

One long-lingering sub-project was to finally assemble my static grass applicator so we could use it to add some grass along the extension. I have been wanting to get to this for a while, and the desire to use it on the extension finally motivated me to complete it. Static grass applicators sell for big bucks – several hundred for some of them. There really isn’t much to them, so rather than fork out big dollars for one, we made ours. You can do the same. The major part needed is an ion generator. This is a little \$5 part, made in China mine, and can be found at some electric supply houses and novelty shops. We bought ours from a local firm online. Google “ion generator” and you will find a source of supply up your way. We bought two of them so we would have a spare should the first crap itself. An ion generator I believe is used in air purifiers and some other devices. It has a 9-to-12-volt input and outputs 4000 to 6000 volts. The output is static electricity, the same as what you get from walking on a nylon carpet in dry weather. There is no serious current, so technically there is no electrocution danger. Should you have a pacemaker or a serious heart problem, I would steer clear of this little item though unless a doctor tells you otherwise. The biggest issue for most of us is, that if not careful, you can get a harmless but very alarming shock that may cause you to move your hand quickly and bang into something which could result in an injury. Taking care to insulate connections and never touching the metal parts will avoid this risk though. Certainly, keep your fingers well clear of the metal screen while using the applicator.

The circuit we used is shown in **Figure 5**. And **Figure 6** shows how my unit was assembled. You can use a 9-volt battery, but we wired ours to a 12-volt supply to get the maximum of 6000 volts.

Figure 5 STATIC GRASS APPLICATOR WIRING

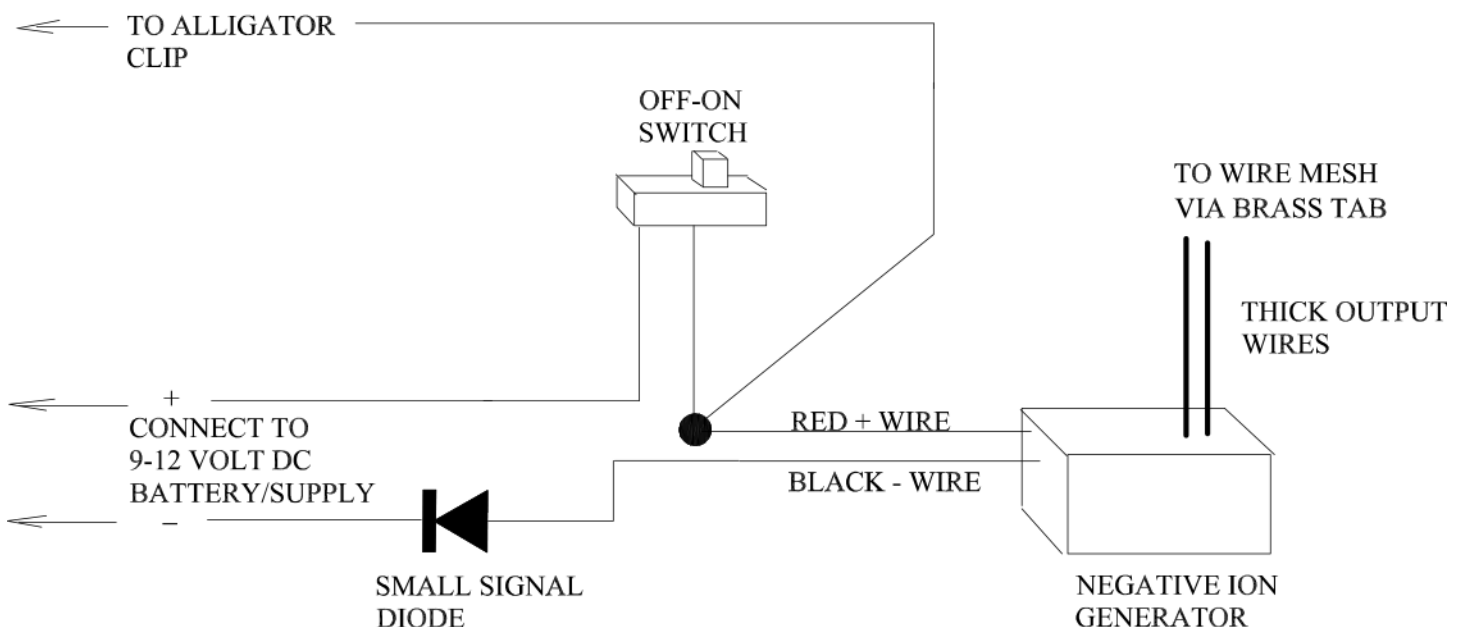
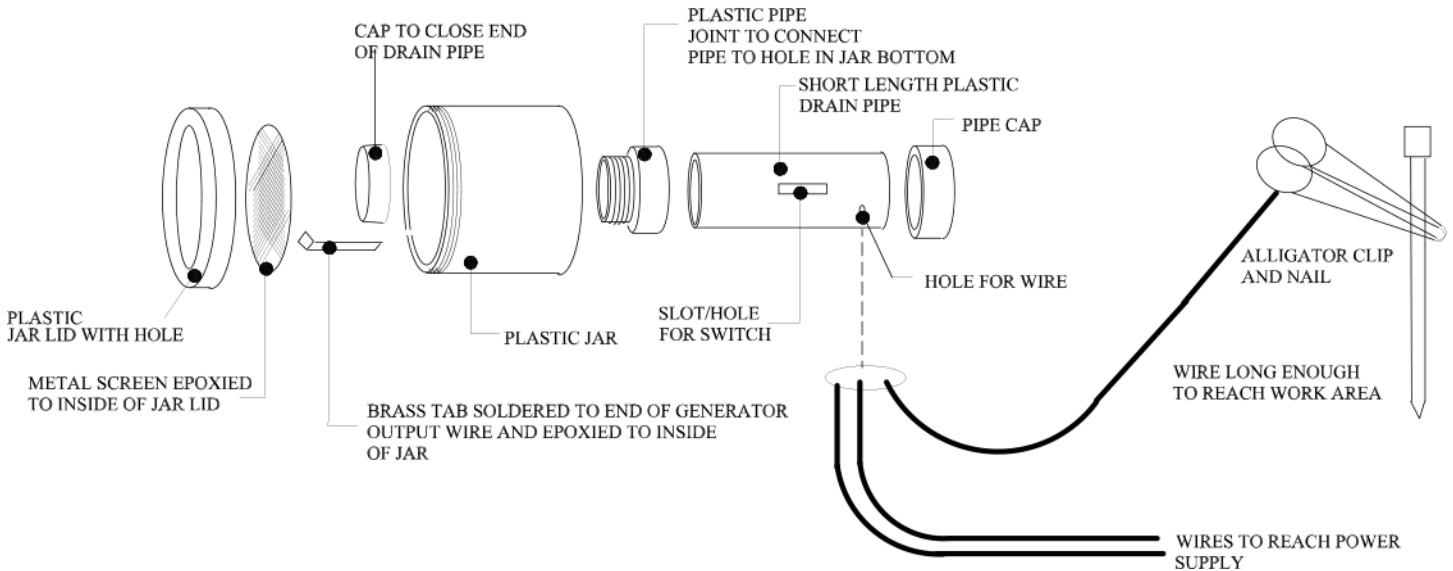


Figure 6

ASSEMBLY OF APPLICATOR BODY



We just plug our applicator into our test power supply and set for 12.7 volts. The circuit is polarity sensitive, so the diode was added to the power input to make sure the polarity would always be correct. The supply voltage was cranked up from 12 to 12.7 to compensate for the 0.7 volts that will be lost across the steering diode. With the diode, if you accidentally wire the thing backwards to the power supply, it just won't work. Reversing the leads will get you going. The higher voltage from the 12-volt input, rather than a 9-volt battery, will allow you, in theory, to "plant" you grass from a greater distance between the applicator and the layout. Another issue with using a battery is that you would need to disassemble your applicator once in a while to change the battery

We used all plastic parts to ensure good insulation. Just some cheap plastic plumbing fittings and a bit of drain pipe were glued together to form a handle that held the generator, on-off switch and some wires. We had purchased some plastic fittings while still searching high and low for the ion generator bought some time before. We had earlier put the generators away for safe keeping and forgot the location as is usual. When finally finding the generator, it would not fit into the pipe just bought. So off to the hardware store again to get some larger diameter parts we went. A cheap plastic flashlight could be used as well.

The wire to an alligator clip (which will attach to a nail in the wet glue where the grass is wanted), and the two power wires, exit the pipe handle through a small hole. The on-off switch was screwed to the pipe at a hole cut for it and the other parts were insulated with shrink tube and tape and just stuffed inside the plastic pipe. Best to keep the applicator turned off when not in actual use to avoid an accidental shock so the switch makes this easy.

For holding the static grass, a discarded plastic peanut butter jar was pressed into service. A hole was cut in the lid and the jar bottom. Some plastic pipe fittings on the end of the pipe allowed me to screw the pipe handle to the bottom of the jar via the hole. Note the screen at the business end of the applicator must be metal. I bought brass screen from Clover House called "20 mesh" (Part No. 789) which seems about the right size. If the mesh is too small you can't get the static grass to readily flow through to the layout. If the mesh is too big, the stuff falls out. Some metal window screen scraps would also be about the right size and work. If aluminum, the pressure connection to the tab, see below, could be less effective, but should work. Brass is better. Some window screen was once made of copper so that would work nicely as well.

The metal screen was epoxied to the inside of the cutout jar lid. To enable the jar lid to be removed for filling with static grass, but to still provide the essential electric contact to the generator output, a tab was

soldered to the ion generator output wire and then epoxied to the inside of the jar. When the lid is screwed onto the jar, the tab makes contact with the underside of the screen. You need to sand both the underside of the screen and the top of the tab after epoxying in place to make sure you remove any blobs of epoxy and get essential metal-to-metal contact between the screen and tab.

I had saved some instructions in my files, published some years back in our local NMRA periodical, for building such an applicator and referred to that for help, too. When done building mine, we planted some grass along the extension using our new tool. To use the applicator (1) fill the jar with static flock, (2) add lots of glue to a small scenery area where grass is desired, (3) push the nail, with the alligator clip attached, into the scenery area where the glue has been applied, (4) hook up to power and turn on the switch on the applicator handle, and (5) hold the applicator, screen down, over the area and as close as you can. The flock, in theory, will jump from the applicator to the glued area and stand erect in the glue. You can tap the side of the plastic jar if the static flock is reluctant to exit the jar. And, **KEEP YOUR FINGERS AWAY FROM THE METAL SCREEN** or you will get a sudden thrill. We tested our home-made applicator using some flock we had in our hoard of scenery supplies. It appeared to be working fine. The flock was very short stuff, so we went off to get some longer flock and give the new tool another test run.

One thing we did notice is that the longer flock tends to fall over onto its side rather than stand erect. I suspect this is due to watering the glue too much. A tacky, sticky glue is probably better here. We will be trying this again soon using some straight glue **Photo 44** shows our completed applicator.

Photo 44



Millhouse River Studio **Made in USA**
 Turntables • Transfer Tables & Coal Industry Items

Products That Are Built to Last Generations!

Manual or Auto Indexed Lost Wax Brass Castings TMCC Control

(716) 830-5267

SALE

Turntables from 24" - 34"
 Optional Turntable Railroad Specific Arches & Extra Bridge Details Available

Aluminum Construction Rotary Coal Dumper
 2 or 3 Rail

Classic Wood Version
 Steel Version also Available


O Scale Operating Coal Tipple Flood Loader

Scale Transfer Table
 28" Weathered Version Shown

Check Website for Details

www.millhouseriverstudio.com

Berkshire Valley Models



Pick up some fruit for the Holidays! Lots of details to choose from.

www.berkshirevalleymodels.com

Next issue we'll continue with layout wiring, over head wiring, turnout controls, and operations.





'O' Scale First with Accurately Scaled Rail Since 1963

**Now Producing Red Cliff Miniatures
& American Switch & Signal**

Rail, Turnout & Crossing Parts, Switch & Track Parts
Wood Ties, Track Spikes, P48, Motors & Drives

2286 Hampton Way
Clovis, CA 93611
559.297.0505

Jay@right-o-way.us
http://right-o-way.us

The Public Delivery Track

5000+ O gauge items in stock
100+ PDT special run items
2 Rail and 3 Rail

Atlas ● MTH ● GGD ● Lionel
Weaver ● Williams ● Woodland Scenics

www.PublicDeliveryTrack.com

pdt212@gmail.com . 805-226-0320
P.O. Box 2637, Paso Robles, CA 93447

Wasatch Model Company

The California Zephyr Passenger Train is in Production



ALLEGHENY SCALE MODELS

O SCALE LOCOMOTIVES & ROLLING STOCK

Sales, Collections, Consignments, Appraisals
Brass, Custom Built Models, RTR, Kits, Decals

470 Schooley's Mountain Road, Suite 8-117
Hackettstown, New Jersey 07840

www.alleghenyscale.com

PH: 908-684-2070 FAX: 908-684-8911
oscale@alleghenyscale.com



Grab Iron Ends
(Nut/Bolt) and
for modern
cars, Grab Iron
Ends
(Rivet). These
small parts will
really dress up
an older
Athern/Reynol

ds/AllNation car as well as some new cast cars and,
of course, your own custom built equipment. The
stem is .020 and designed for .015 wire. There are
17 parts per sprue and four sprues package.

Model Railroad Resource 3D Division - Resin Parts



Also our new double
Nut/Bolt grab iron end
used on many
caboose.



RailFonts.com

**YOUR SOURCE FOR OVER 80 RAILROAD
LETTERING, RAILROAD ROMANS, ALPHABETS,
SILHOUETTES, DINGBATS, TRAINS, PLANES
AND AUTOMOBILES AND EVEN SOME
SURPRISES. ALL FONT SETS ARE AVAILABLE
IN WINDOWS, TT AND ATM, OR MAC
VERSIONS.**

AMERICAN SCALE
MODELS



Purchases and Sales of Scale Model Trains

Estate and collection liquidations

Consignment Sales

Purchases of new, used, and unwanted equipment

References gladly furnished.

Bill Davis, P.O. Box 1011, Oconomowoc, WI 53066 • (262) 560-1619 • bdavis148@aol.com
Visit my website at americanscalemodels.com for models, detail parts, trucks, and more!

TRAINZ

Trainz wants your O scale collection! With over 45 years of experience, we make it easy to sell your collection.

sellmytrains.com/osr
(866) 234-1900



Looking for a great selection of new and used O scale trains?

Visit trainz.com



Tru-Color
Paint

Paints &
Accessories

When Only the
TRUEST
Color Will Do!

P.O. Box 74524 Sales Phone: (714) 488-9779
Phoenix, AZ 85087-4524 Info Phone: (623) 551-2548

website: trucolorpaint.com

e-mail: tru.colorpaint1@yahoo.com

January, 2024 Sets

11013: New Haven

- TCP-036 Warm Orange
- TCP-037 Hunter's Green
- TCP-038 401 Green
- TCP-039 Socony Red
- TCP-040 Red-Orange
- TCP-208 Freight Car Red- 1930 - 1950's



10503: Rust

- TCP-404 Matte Light Rust
- TCP-405 Matte Orange Rust
- TCP-406 Matte Dark Rust
- TCP-407 Matte Brown Rust
- TCP-408 Matte Aged Rust
- TCP-457 Matte Generic Rust



February, 2024 Set

11014: Leasing Units

- TCP-101 Georgia Pacific- Blue
- TCP-259 EMD Demo.- Early (Metallic) Blue
- TCP-272 EMD Demo.- Late (Non-Metallic) Blue
- TCP-345 GE Leasing (GECX)- Blue
- TCP-379 TTX Leasing- Intermodal Yellow
- TCP-433 Matte Black

**NEW SERIES- Paints for 3D-Printed
& Cast Resin Objects**

January, 2024

- TCP-5004 Glossy, Sprayable Light Yellow
- TCP-5009 Glossy, Sprayable Dark Green
- TCP-5024 Glossy, Sprayable Beige



Current, 2023

- TCP-5003 Glossy, Sprayable Medium Orange
- TCP-5005 Glossy, Sprayable Medium Yellow
- TCP-5019 Glossy, Sprayable Medium Gray
- TCP-5037 Glossy, Sprayable Aluminum

These paints are specifically designed with enhanced adhesion promoters for 3D-printed and cast resin models and parts.

Come Visit Us at Our [YouTube Channel](#) at: [Tru-Color Paint](#). We are also on [Facebook](#) & [Instagram](#).

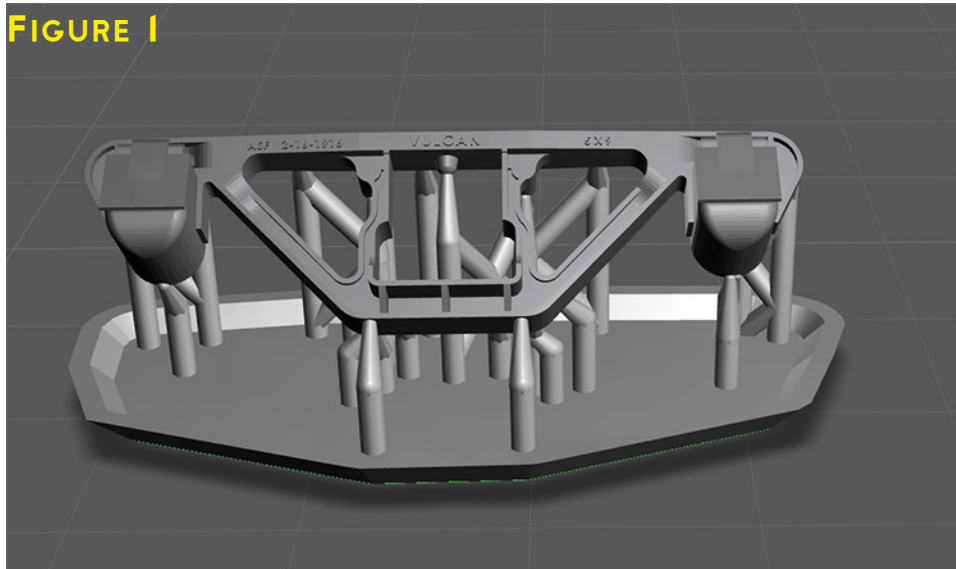
RESIN PRINTING FASTER WAY TO NAIL DOWN SLA EXPOSURE TIMES

By Dan Dawdy

While wandering through some Facebook groups and Discord, I see many people having exposure issues. Many are asking for help and even people's settings. Unfortunately, it doesn't really work that way. My settings may be a starting point for you, assuming the same printer, the same resin, the same temperature and on and on. Even if you have two of the same printers, but one has say 50 more hours on the screen then the other, that may well affect your exposure times.

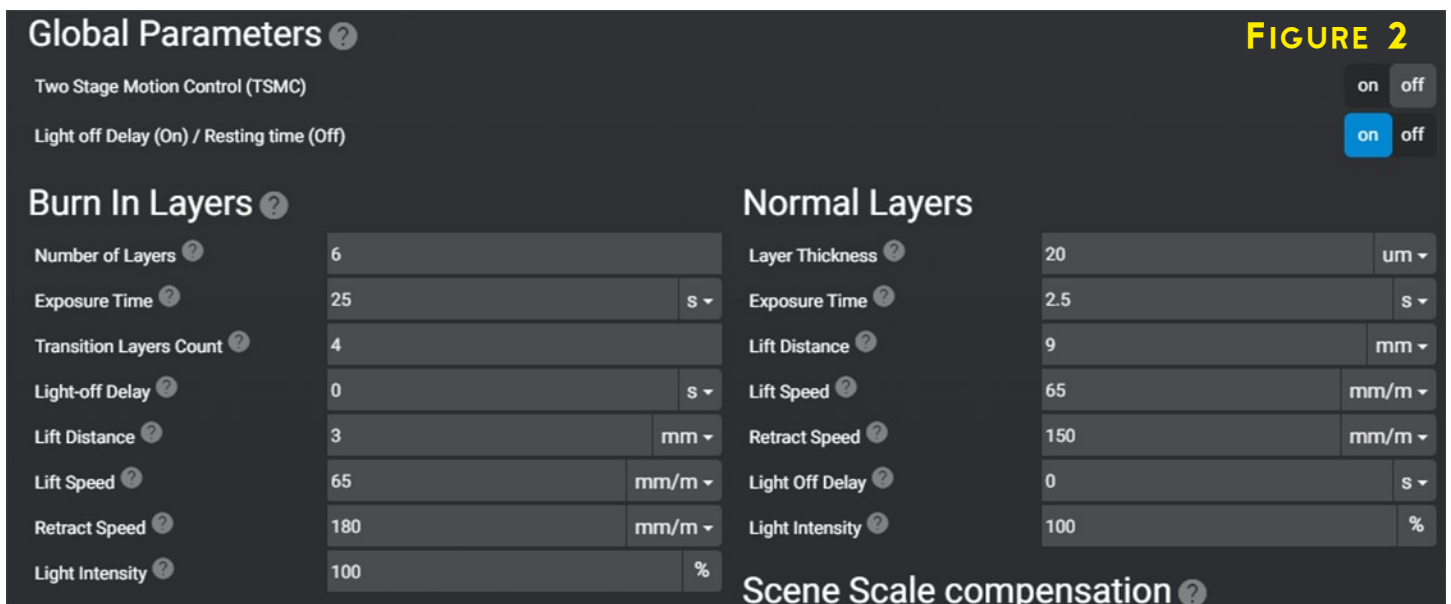
Wouldn't be great if we could print a test print 4 or 6 times at one shot, each with a different exposure settings? Well, if you have a newer printer that supports this, it can be done with a piece of free software which, by the way, you should already be using.

UVtools is a must and it runs on Windows, MAC and Linux. Oh, did I say it's free! [Download here](#). For this article, I am only going to cover one of the many features of this program. Most newer printers will work, but to be sure let's set up a test.



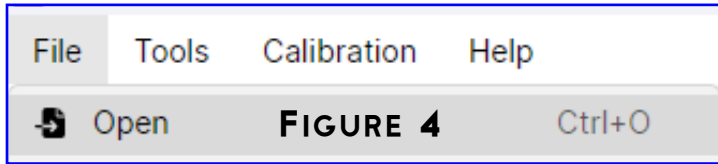
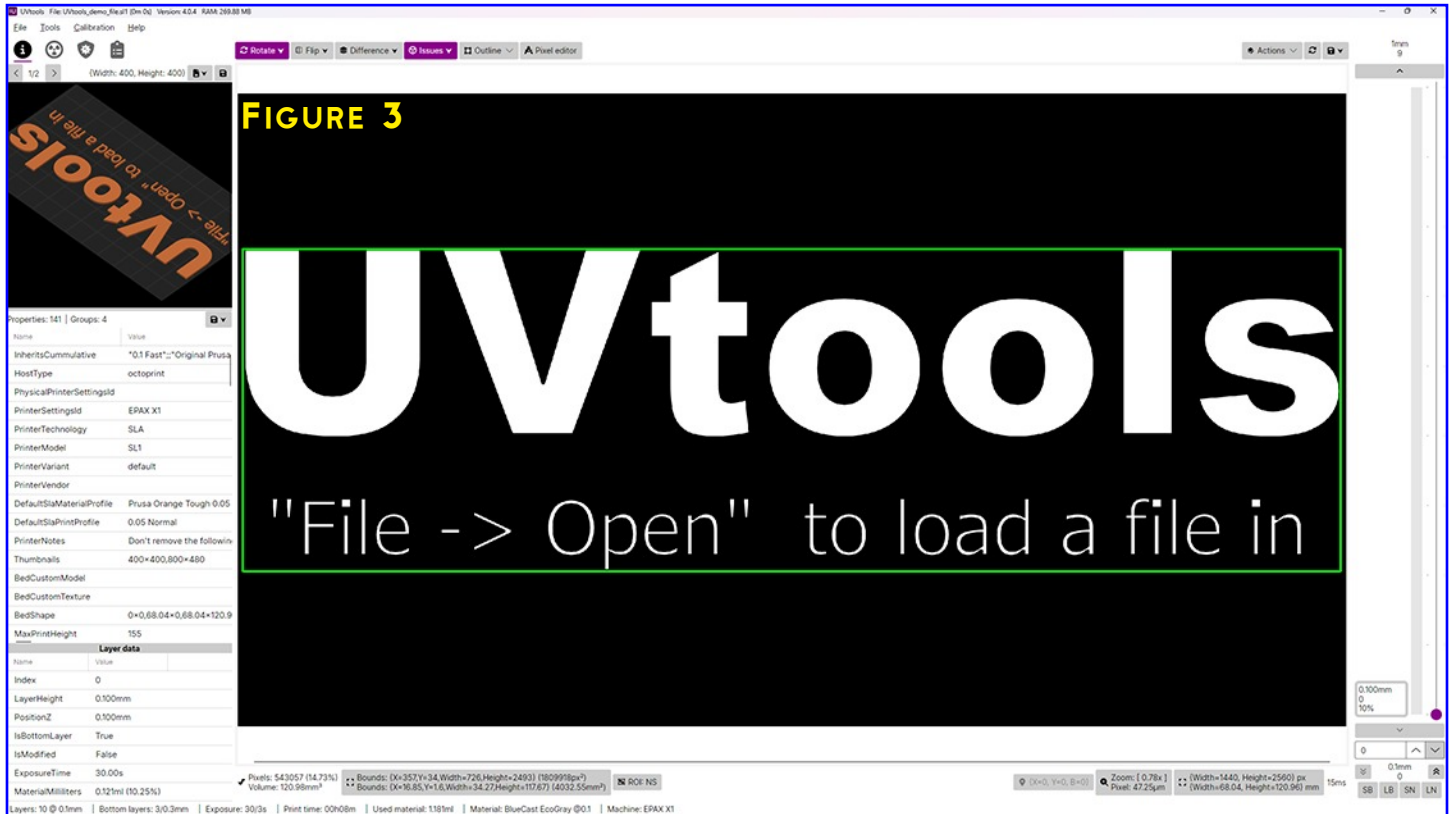
Open your slicer and set up your print. Supports are not needed we just want a file open along with your current settings and what you think the exposure should be. Slice that file and save it. Remember, the file you save contains all the settings data that printer needs along with the slicing instructions.

Figure 1 shows the part in the slicing program. It could be one or many, that does not matter. Figure 2 shows the settings I use this this resin and printer combination.

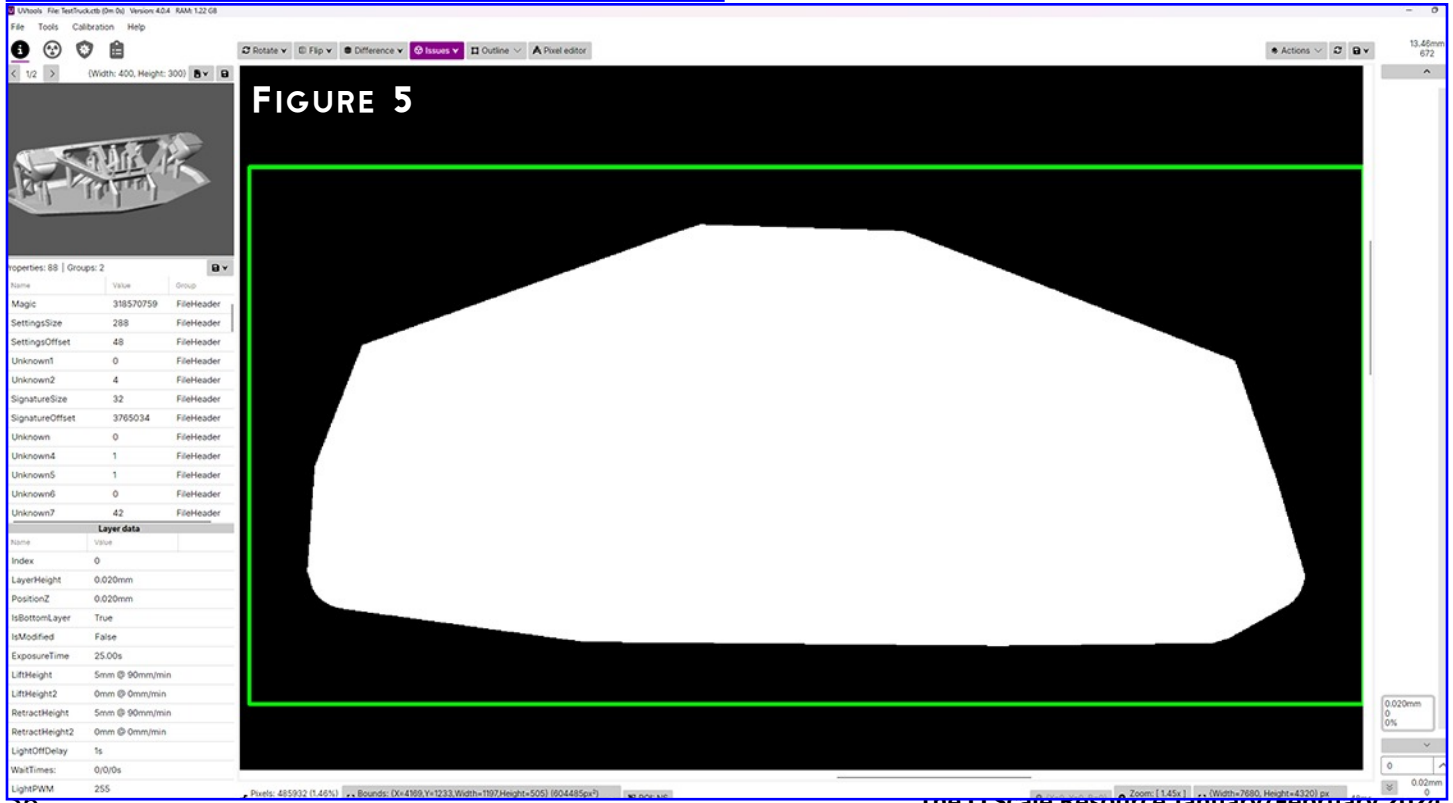


Now go ahead and slice the file as if you were going to print it.

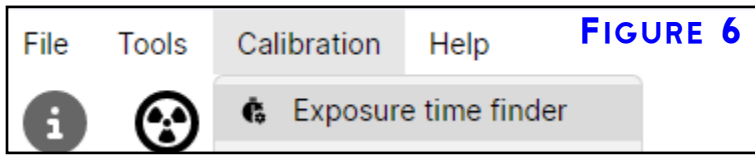
Now, let's open UVtools. Figure 3 shows the user interface. Yes, there is lots of stuff here, but just follow along and don't chase squirrels.



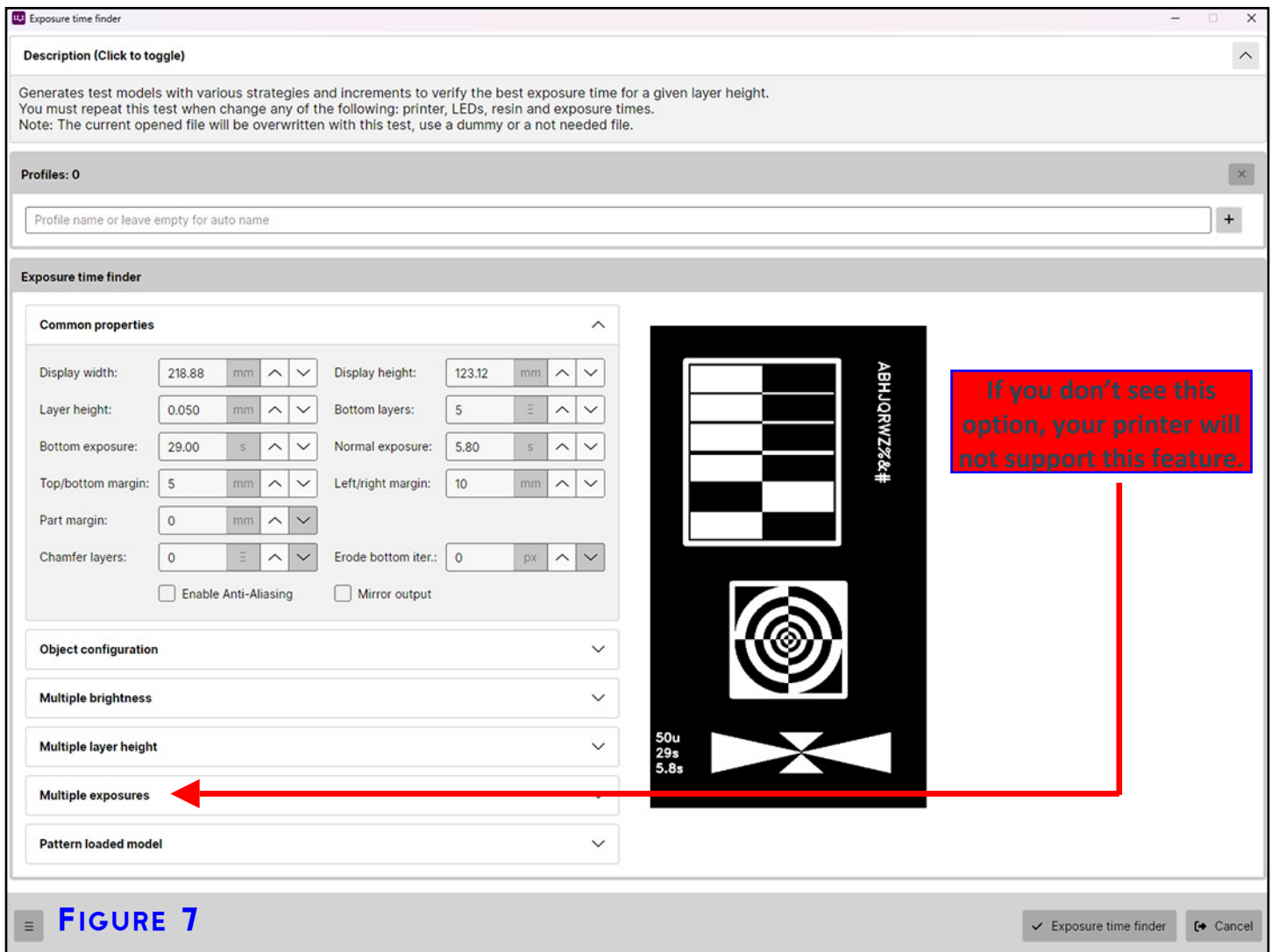
Go to File / Open and select the file you just sliced as shown in Figure 4. Figure 5 shows the file open in UVtools.



You will see the part in the upper left window and the raft is the big white part in the center. You can use the slider on the right side of the screen to move through the object just like on your slicer, but we don't need any of that for this exercise.



Ok, now select Calibration / Exposure time finder as shown in figure 6. Figure 7 shows the result of opening the Calibration / Exposure time finder. At this point, if you do NOT see **Multiple Exposures** listed in the window, your printer will not support this function. Stop, take a deep breath and go read another article... or buy a new printer!



OK, so if you do see this table, let's continue....

The first tab is the **Common Properties** above (Figure 8 next page). These settings were pulled from the sliced file. The only item we need to change here is the **Normal Exposure**. If we leave it at 2.5, UVtools will use that number as a base and begin adding to it. I think the 2.5 seconds is good, but if I wanted to dial it in better, I would drop to 2 seconds, and UVtools will begin adding from there. I left mine at 2.50 for now.

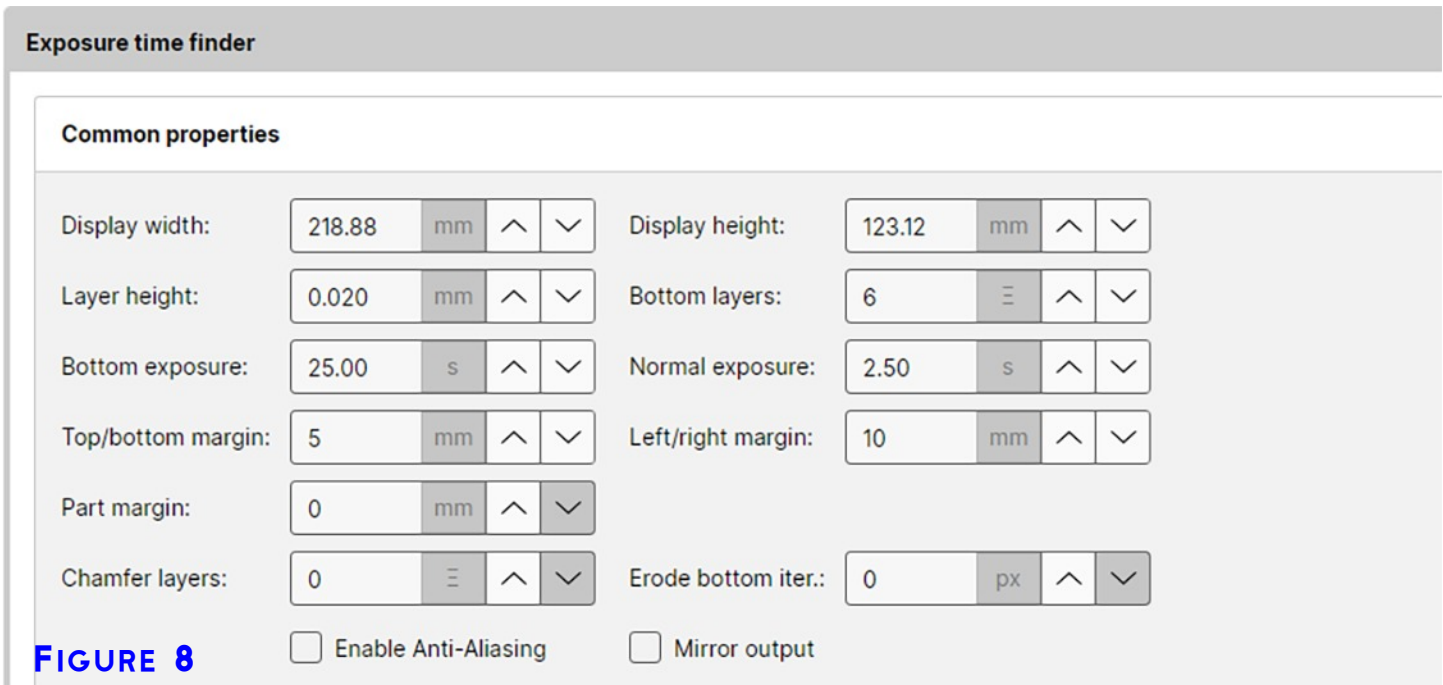


FIGURE 8

The next tab is **Object Configuration** below (Figure 9). Check the Pin (positive / holes (negative) selection. This will print the small holes and bumps on the side of the test print, and is one more piece of data to look at. The text box can be changed to whatever you want. Maybe change it to the resin being used or the file name of the test name, whatever you want.

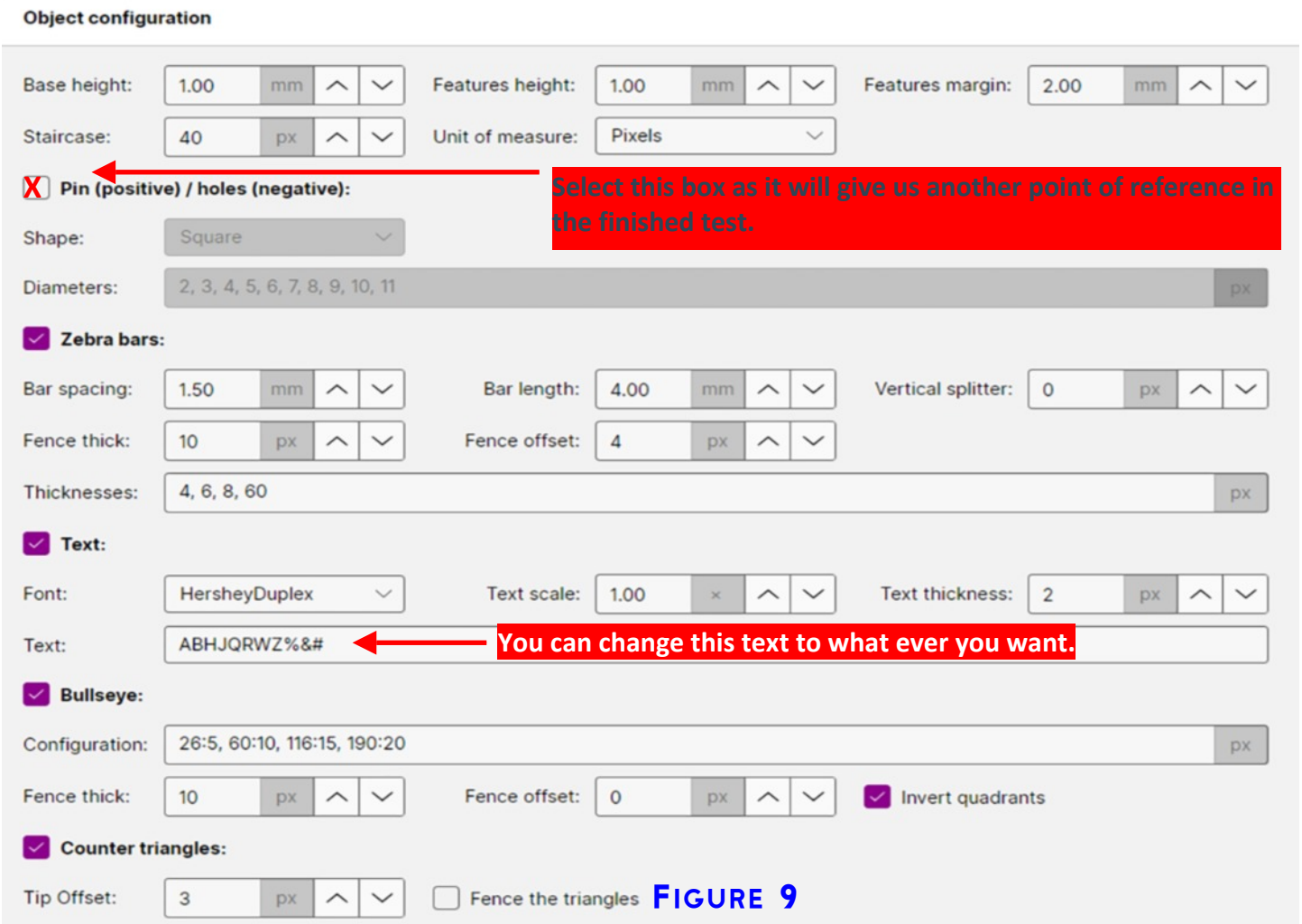


FIGURE 9

Multiple exposures

Only few printers support this, make sure your is supported or else it will print a malformed model. After this, do not apply any modification which reconstruct the z positions of the layers.

Enable - For advanced users only! **Click this box to activate.**

Automatic exposure generation:

Generation type: Ignore global exposures **Generate exposure table**

Bottom step: s s tests

Manual exposure entry: **Normal step** **Maximum**

Layer height: mm Bottom exposure: s s s s **Normal exposure** + Add

Exposure table: 0 entries Remove selected entries Clear 0 entries

Layer height (mm)	Bottom exposure (s)	Exposure (s)
-------------------	---------------------	--------------

Base layers print mode:

Base layers exposure: s (For 'custom' mode only)

Use different settings for layers with same Z positioning:

Lift height: mm

Wait time before cure: s

Multiple Exposure

The last tab to look at is **Multiple Exposure**, and this is where the magic happens (Figure 10 above.) Click the Enable button otherwise you can't make any changes.

The **Normal Step** is the number of seconds you want to increase/decrease from our **Normal Exposure** time which we set at 2.50. So now we will get an exposure of 2.5, 2.7, 2.9, 3.1, 3.3 and 3.5 seconds. This assumes you run six generations. The **Maximum Generations** box is what decided how many tests you will make. I normally do six tests to the number in the **Maximum Generations** box 5 or 5 plus the default one. If we left this at 4 as shown above it would run 5 tests, the default and then 4 more. A **Normal Step** .02 seconds maybe to small so you can go .25 to add a quarter of a second ,or even .5 or a half second to begin dialing in your exposure.

If you are happy with the **Normal Step** time and the **Maximum Generations**, you can now hit the **Generate Exposure Table** bar.

Figure 11 on the next page shows the results of the **Generate Exposure Table**. Note the lines in purple. The layer height remains from the original file at 0.02mm. The bottom exposure also stays the same. But look at your exposure times. We specified 2.50 normal exposure which is shown in the first row. Then the next exposure time is 2.7 seconds which is our normal exposure time plus the **Normal Step** we specified of 0.20 seconds. The rest of the times, follow our original 2.50 add adds 0.20 seconds to each test.

If you think it looks good, select the **Exposure Time Finder** (Figure 12) at the bottom right. A pop up box will ask "Are you sure you want to generate the exposure time finder test?", select Yes. Once it is finished going through the layers, you will return to the original screen For some reason, UVtools shows a zoomed in image so using your mouse, zoom back out.

Multiple exposures ^

Only few printers support this, make sure your is supported or else it will print a malformed model.
After this, do not apply any modification which reconstruct the z positions of the layers.

Enable - For advanced users only!

Automatic exposure generation:

Generation type: Ignore global exposures Generate exposure table

Bottom step: s Normal step: s Maximum generations: tests

Manual exposure entry:

Layer height: mm Bottom exposure: s Normal exposure: s

Exposure table: 5 entries

Layer height (mm)	Bottom exposure (s)	Exposure (s)
0.02	25	2.5
0.02	25	2.7
0.02	25	2.9
0.02	25	3.1
0.02	25	3.3

Base layers print mode:

Base layers exposure: s (For 'custom' mode only)

Use different settings for layers with same Z positioning:

Lift height: mm

Wait time before cure: s

FIGURE 11

FIGURE 12

The video below is what happens on the printer screen as we scroll through the slices using the scroll on the far left side of the screen. This is how it will print.

Click to watch on YouTube



The last step is to click on **Save As** under the **File** command and give the file a name that means something to you. That is the file you will now print. My example is below in Figure 13. After printing, clean carefully, but do NOT cure it. Now you can study the results. Figure 14 is a better graphic of what to look for.

FIGURE 13

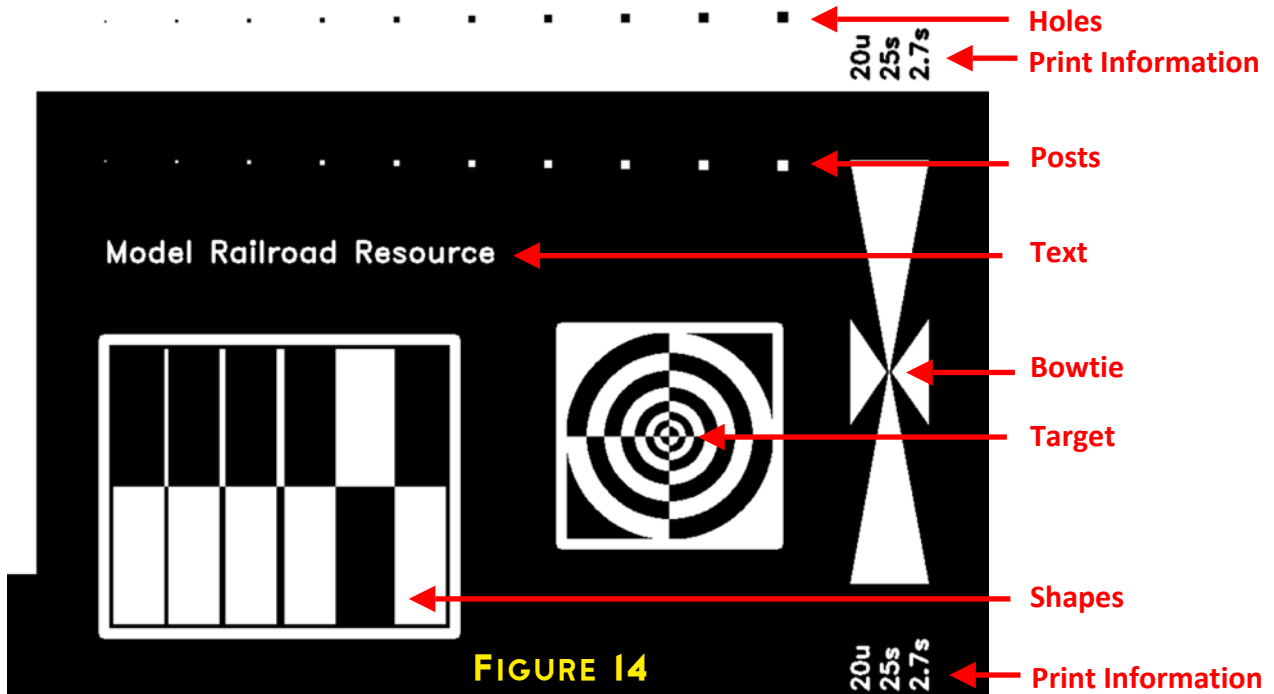
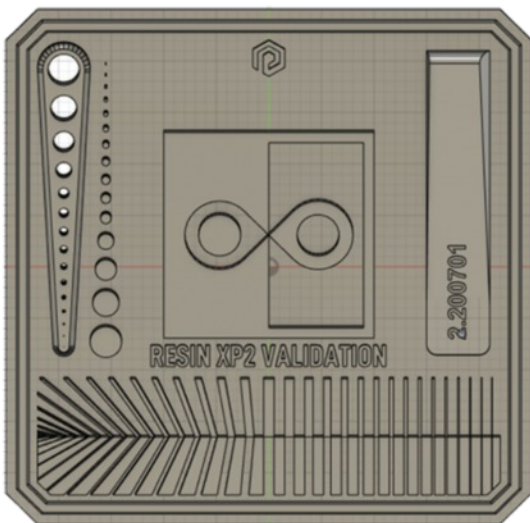


FIGURE 14

I may have made up a few of the names, but it makes sense to me. Here is what we are looking for:

- Holes / Posts: You would like to get the same number of holes as posts. More holes than posts is under exposed and conversely, more posts than holes is over exposed.
- Text: Sharp and not blocky compared to the others.
- Shapes: Can the fill shapes slide into the voids? Over exposed the filled shapes will be wider than the void or opening.
- Target: All the lines should meet up at the center.
- Bowtie: All angles should be just touching in the center.
- Print Information: This shows the layer height of 20 microns with a 25 second bottom layer time and then each result will have the actual exposure time from the exposure table. In this case: 2.5, 2.7, 2.9, 3.1, 3.3 seconds.

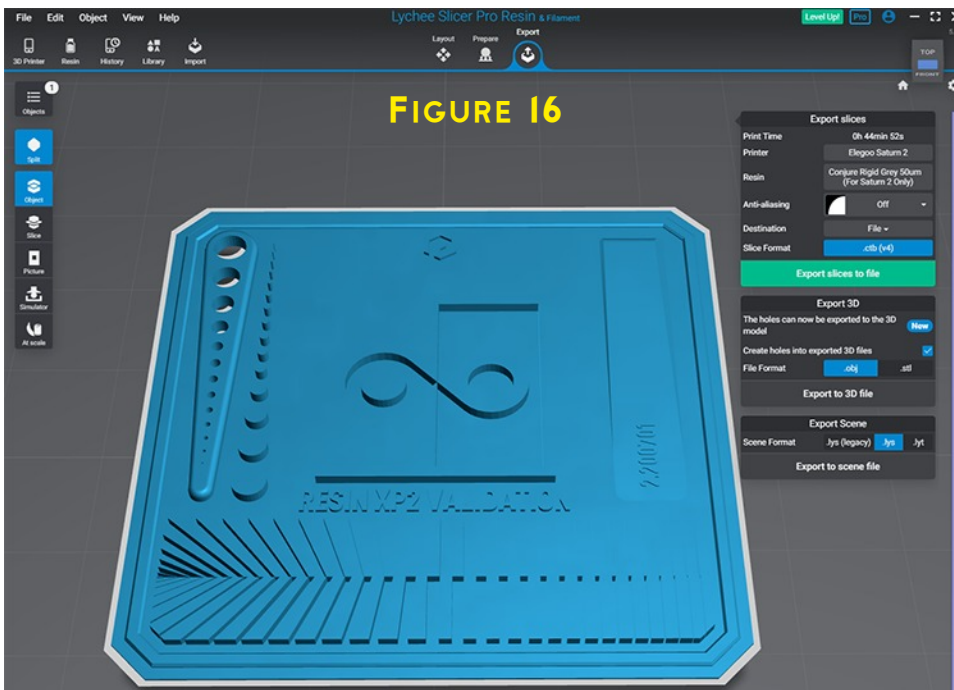
FIGURE 15



I am not a real fan of this model as it's hard to read and there is some interpretation. I would rather use the XP2 Calibration test print. Figure 15. ([Download here.](#)) Others may like the AmeraLabs Town or Siraya Tech's version or something else. Wouldn't be great if we could print our favorite test model just like the UVtools version? Well, we can! Bring your test model into your slicer. Remember, before we brought in any model so UVtools would have the information it needed. This time our model will be the test model we want to use.

Figure 16 shows the XP2 Calibration test print in my slicer. Slice as normal and open on UVtools.

FIGURE 16



Common properties

FIGURE 17

Display width:	218.88 mm ^ v	Display height:	123.12 mm ^ v
Layer height:	0.050 mm ^ v	Bottom layers:	4 ≡ ^ v

Again once in UVtools, open the Calibration / Exposure time finder as shown back in Figure 6. Now go back and follow all the instructions with the first exception being, in the **Common Properties**, set bottom layers to no more than 4. (Figure 17)

Pattern loaded model

FIGURE 18 ^

This option will pattern the current loaded model and generate multiple exposure tests with it. Only few printers support this, make sure your is supported or else it will print a malformed model. After this, do not apply any modification which reconstruct the z positions of the layers.

- Enable - For advanced users only!
- Glue bottom layers to merge the model into one piece
- Intrude text in bottom layers with the model parameters

Second exception, do nothing with the **Object Configuration** box. Scroll all the way down past the **Multiple Exposures** to the next window called **Pattern Loaded Model**. (Figure 18.)

Select **Enable** and **Glue Bottom Layers**, but not **Intrude Text**. Now, scroll back up one window to **Multiple Exposure** and once again, do everything we did previously.

So in case I lost anyone: Slice a test print of your choice and then open it in UVtools. Go to **Object Configuration** and set layers to 4. Skip **Object Configuration** and go to the very bottom to **Pattern Loaded Model**. Select as shown in figure 18 above. Lastly, go to **Multiple Exposures** and finish that just like we did starting in Figure 10. **Generate Exposure Table** and then **Save As** to a new file. The video below show again shows the progression of the print using the slider.

Click to watch on YouTube



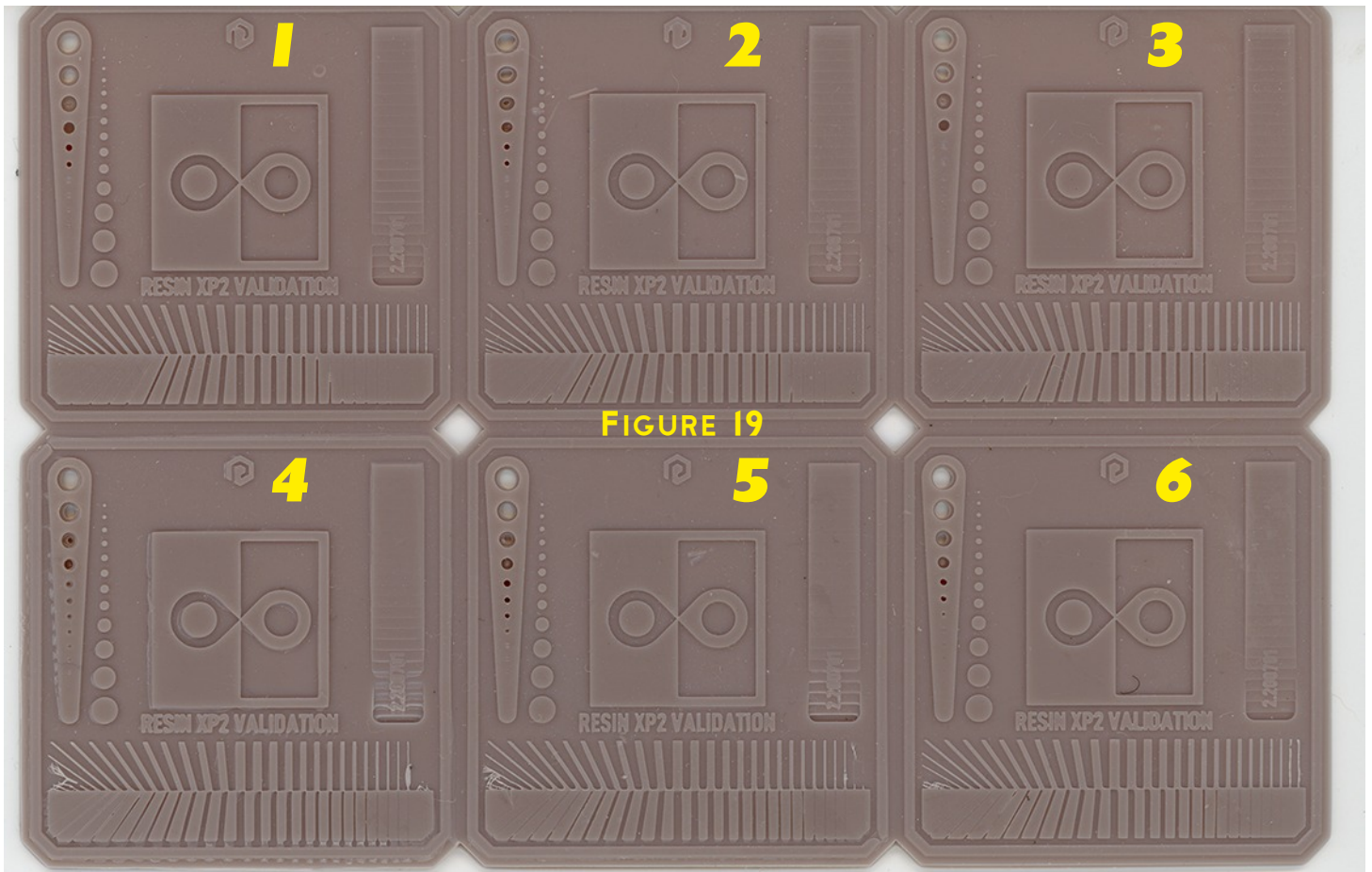


Figure 19 on the next page shows my results running **Maximum Generations** box 5 or 5 plus the default to give me six tests.

In this test print, the main thing I am looking for is the the number of Posts and Holes. Number 1 above has many more posts than holes. This is over exposed. Number 4 and five have almost the same number of each. Number 4 would be my best bet. Here is a great video just explaining this test.

Click to watch on



Now, if the above test was using 0.25 seconds and you feel number 4 is good, you could rerun the **Multiple Exposures** at 0.20 and really dial in in with another 6 tests. Remember **DO NOT** cure this model, but clean it carefully and start making some decisions. Remember things like temperature will have a very large effect on print times so be consistent. Also, this will pinpoint your exposure. You may still have other issues like a model pulling off the build plate or failing because of other factors like retract and wait times. That's a whole other article. Speaking of other articles, if you have not read through my article [Welcome to 3D Resin Printing 101](#) you should check it out here!

In the meantime, give this try and happy printing!

Building a Severn Models Apex Roof Garden Shed

By Jim Miller

Email author by clicking on their name.



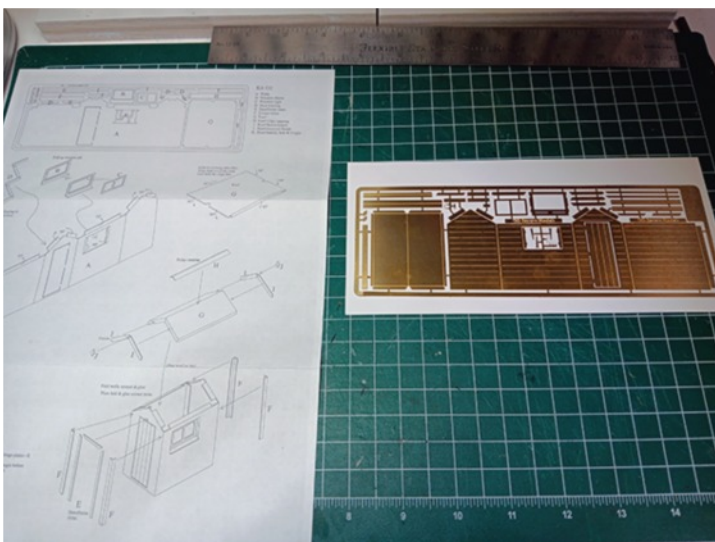
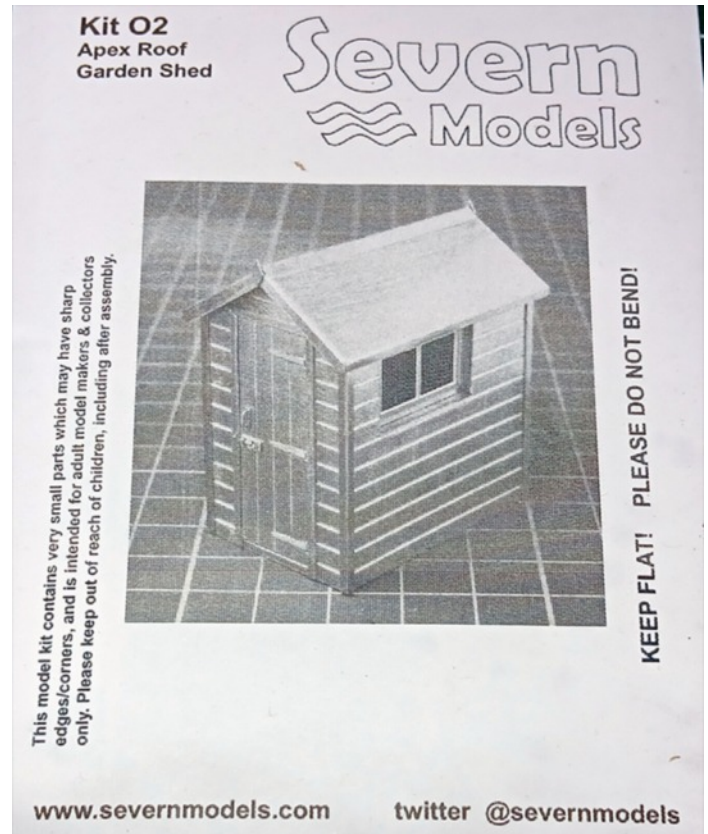
Jim Miller won the Garden Shed kit from Severn Models by entering the contest in the [January/February 2023](#) issue of this magazine. He sent us this article after building the model.

Here is what I have done with the etched brass model I won.

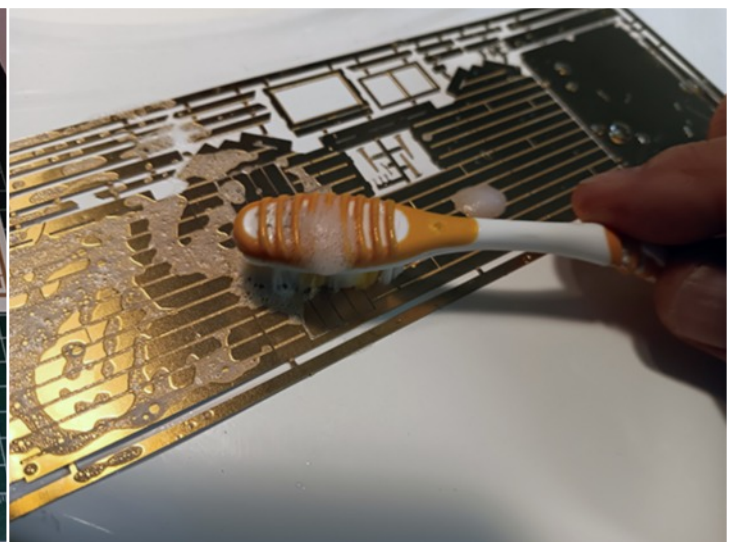
I have never tried a brass kit. It has been challenging but the instructions are clear enough. Thankfully I had invested in a Dollar Tree plastic storage box, above. Each small part has its own section as it was cut from the spruce.

After winning *The O Scale Resource* New Tracks drawing, I chose the [Severn Models](#) "O scale, Kit O2, Apex Roof Garden Shed". It looked like something simple to practice a new skill with.

It arrived from England shipped flat in a standard #10 business envelope.



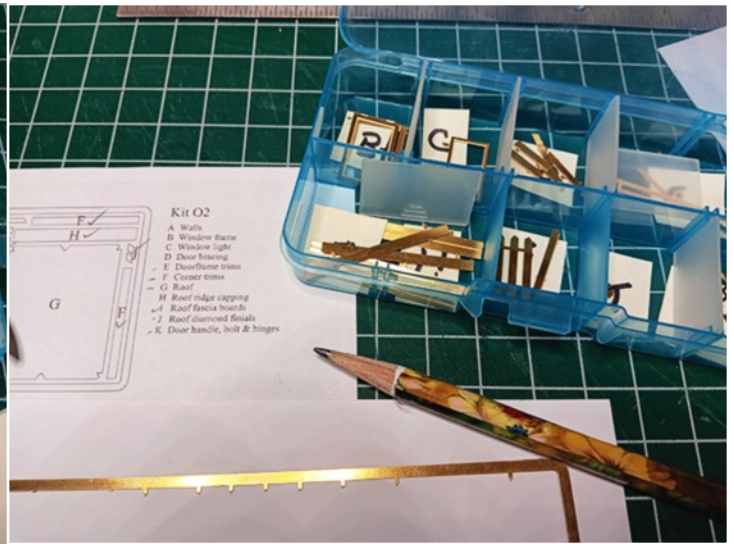
The instructions were very clear, if a little intimidating in spots.



To remove any oils or contaminants from the brass, I gently washed the entire sheet intact with a mild detergent and a soft toothbrush.



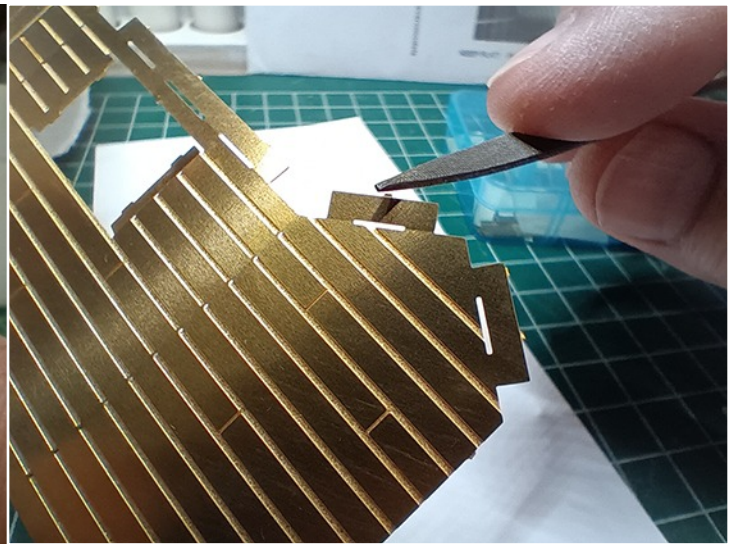
Next up, I had a small container with compartments that I labeled for each of the really small parts using the same letter designator as on the instructions.



Using a sprue cutter, each part was carefully removed from the carrier sheet, put into the container section with the same letter, and checked off the list.



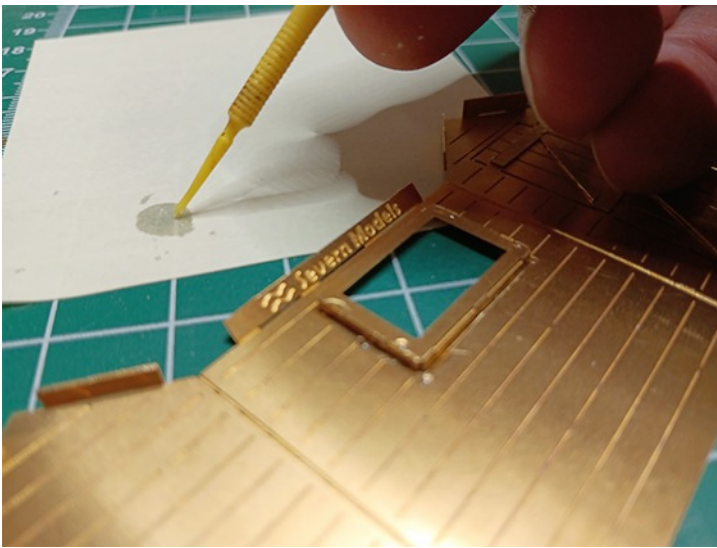
The door hinges and the latch were very tiny in O scale. Time to get out the magnifying glasses.



Basically, I just followed the instructions trying not to miss any steps or taking short cuts. Remember, this was my first brass kit. There seems to always be little bits that the "flush" cutter doesn't quite get off. It was simple enough to use a small file to knock them down.



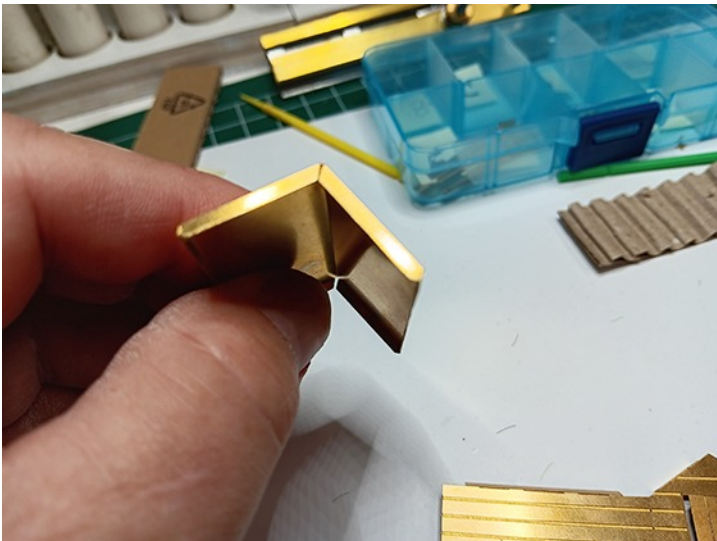
Using a steel straight edge and a chisel blade in my hobby knife, it was easy to gently fold for gluing.



I didn't want to try soldering brass, so I followed the suggestion to just use small amounts of CA adhesive to join the parts.



It took some fine tweezers to attach the door hinges and assemble. Yes, I had to assemble the door handle/plate and the door latch.



The roof subassembly was next.



After folding the four walls of the shed together I used my Coffman "Original Right Clamp" to keep the corners square and tight for gluing.



Once the walls were set, it was time to attach the sunroof section. A little CA and a microbrush worked great.



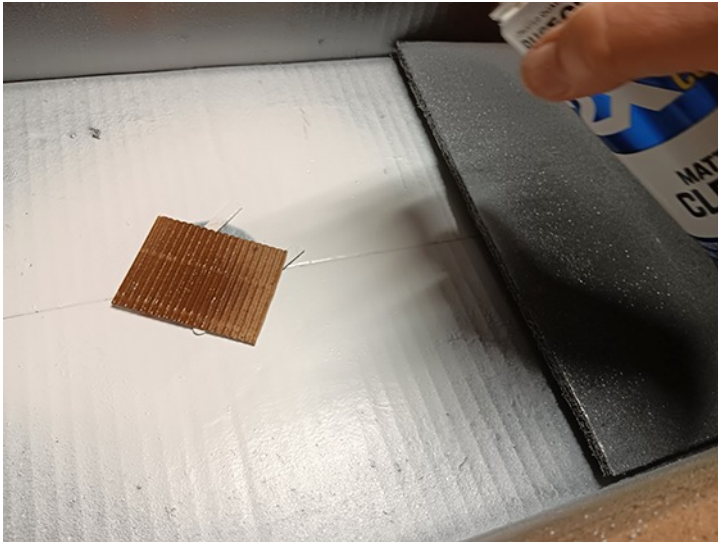
This is what I ended up with... for now. Corrugated roofing is next.



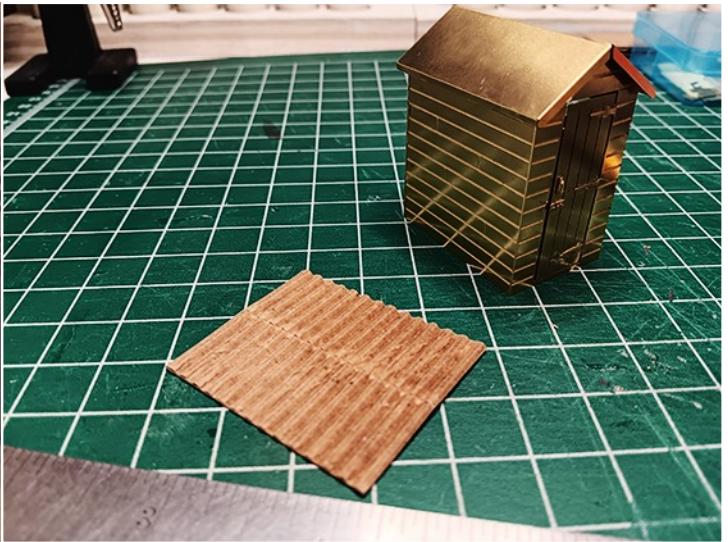
There are several ways of making roofing materials for models. I have envisioned my little building used to store dynamite for my On30 Sumpter Valley Mining and Lumber Railroad.

With dynamite inside, you typically don't want stray sparks catching the roof on fire. Corrugated steel is about as fire proof as you can get. This is a low budget operation. Looking around at what I had available there was a USPS Priority mail box handy. Looking at the edge the little corrugations looked about right for my roof. But how to release them without turning them back into pulp? Isopropyl alcohol to the rescue!

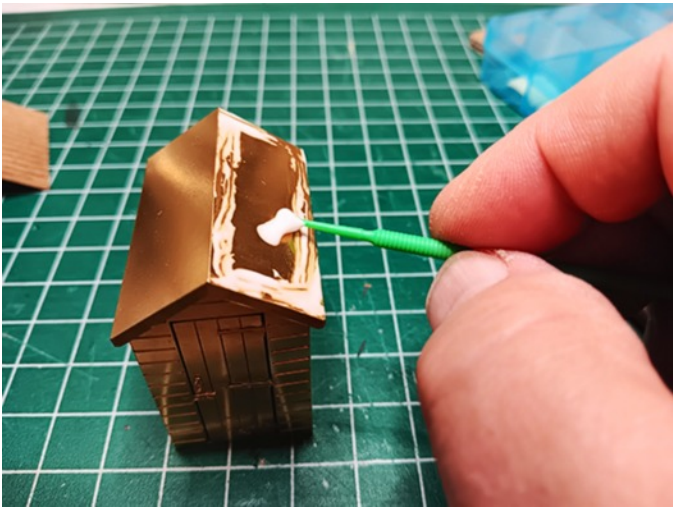
After trimming a section of the box to fit the roof, with some wiggle room left over, I soaked one surface with 70% alcohol. Then it was a simple matter of peeling the unwanted parts away from my corrugated roof.



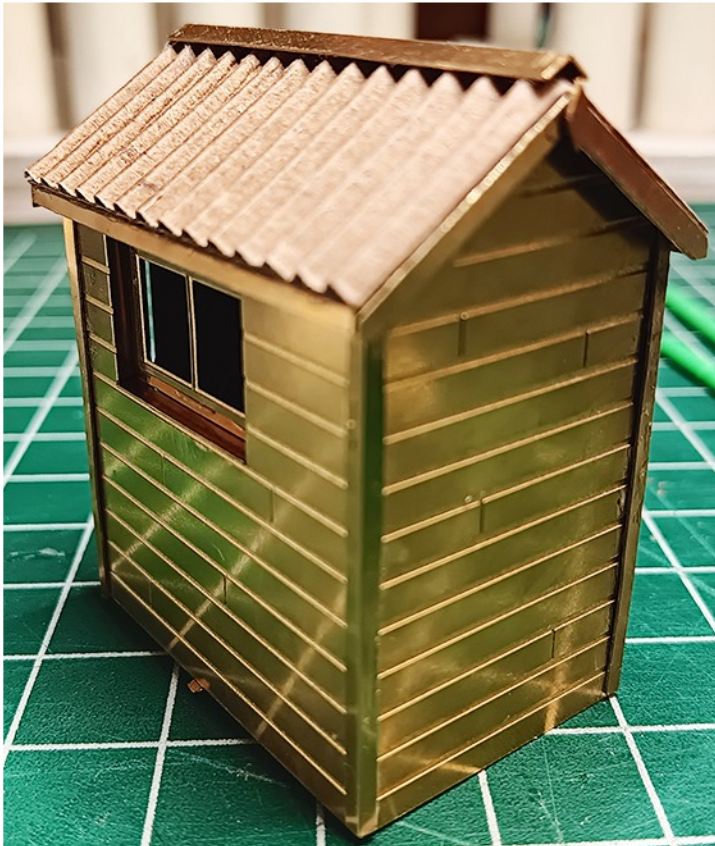
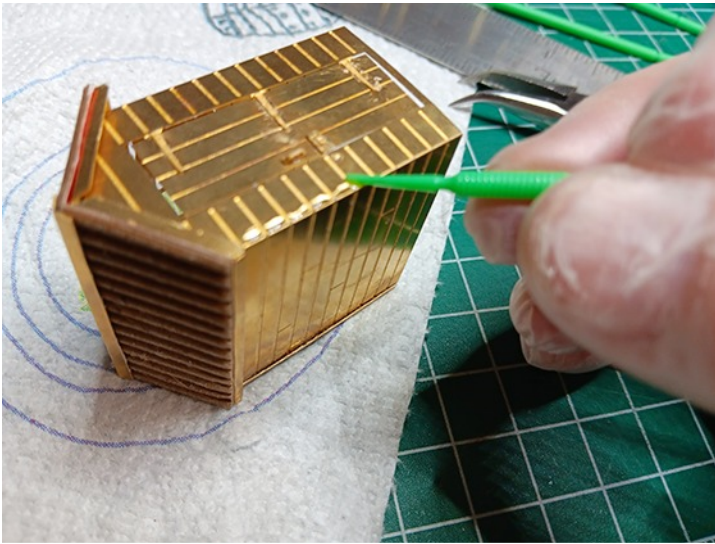
To seal the exposed cardboard "steel", a few shots of clear matte spray did the trick.



The roof was scored to fit over the ridged roof ready for the next step.



Aleene's Tacky Glue spread over the brass subroof and a couple of rubber bands kept the steel in place until the entire assembly dried.



Now that the roof is on, the building needs some finishing trim to look more complete.

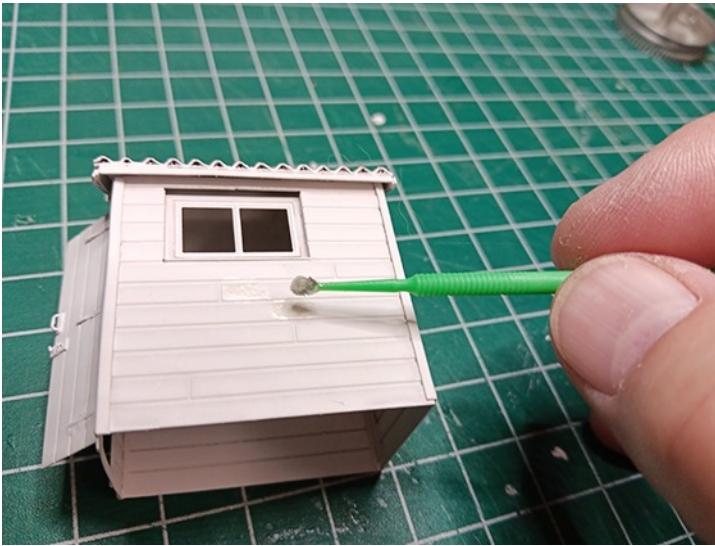
CA, micro brushes and fine tweezers to the rescue!

With the roof ridge, corners and door and window frames in place, it is time for a primer coat.

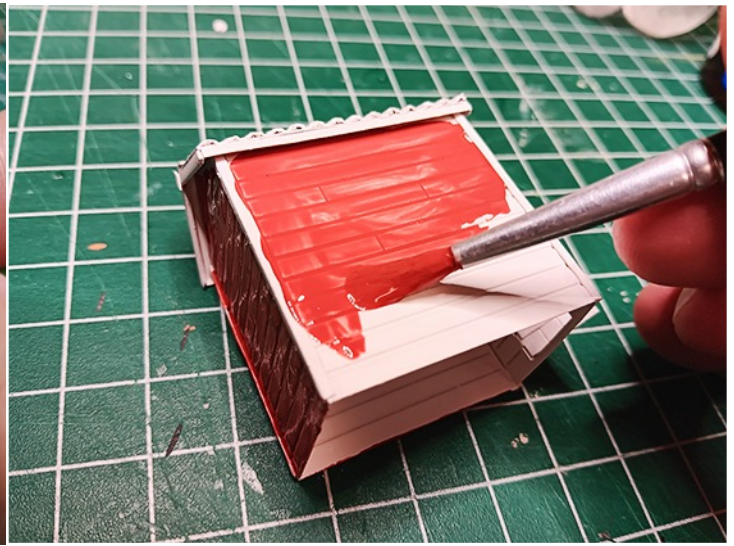
An even coat of white primer from a spray can, inside and out, sets the stage for the next step: paint and weathering.



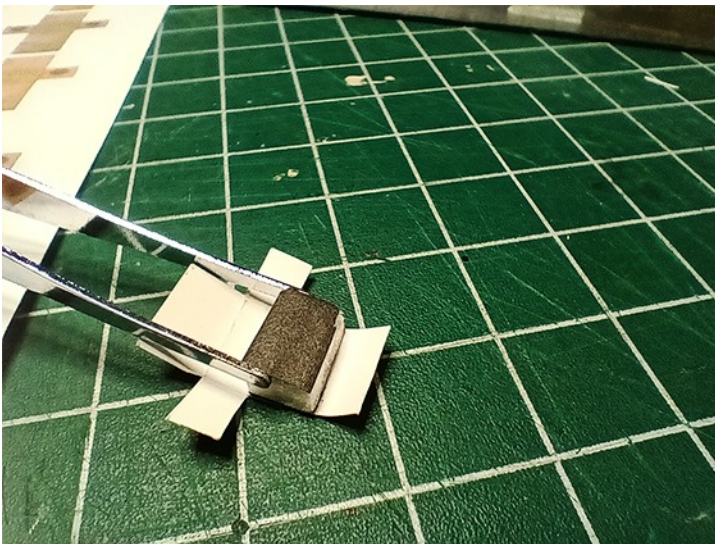
The roof wanted to collect primer in the troughs. The excess was picked up with a simple cotton swab before it dried.



Since I wanted the dynamite shed to look a little rundown there should be some peeling paint, right? A few judicious dabs of good old rubber cement under the final color coat should do the trick.



The building then received a coat of simple acrylic tube paints mixed to get an appropriate red oxide color.



No dynamite shed is worth the name unless there are some dynamite boxes around! Thanks to David Meeks at Thunder Mesa Studios, the boxes I needed were acquired and assembled.



It isn't easy to see, but these are some premium dynamite boxes from the Lytum & Hyde Explosive Company.



It takes several trips to the Chopper to make enough boxes.



A flickering LED was installed through the base and some boxes were stacked inside the shed. Now you can see the dynamite boxes through the window.



Some Doc Brown's weathering powders were used to age the building.



We got a discount on the dynamite when we agreed to put a company sign on the building!



Might as well get two discounts with a second sign on the widow side of the shack. I like being able to see the boxes of dynamite through the window when the flickering lantern is lit.

This was a fun build for me. I am grateful that Andy of Severn Models agreed to sponsor this contest, and to Jim Kellow for encouraging us modelers to try something to stretch ourselves with some new skill.

I hope my learning experience in brass will encourage you to try some modeling outside your comfort zone.



You can also see some boxes through the open door, even though it is only slightly ajar.



B&O M-2 34' Box Car
#19425 O \$ 49.95



25' USMRR Gondola
#19528 O \$ 32.95



PRR XA 28' Box Car
#19426 O \$ 49.95

Backdate the Freight



34' Truss Rod Flat Car
#19603 O \$ 37.95



34' Truss Rod Gondola
#19604 O \$ 45.95



A&GW 21' Flat Car
#19526 O \$ 32.95

B.T.S.
Better Than Scratch!

1782 Trinity Rd
Belington, WV 26250
304-823-3729

Shipping \$5.00 / order in the U.S.
Everywhere else actual amount.
www.btsrr.com

Laser-Cut Wood Kits with Plastic & Brass Details.
Box Cars feature Interior Bracing, and Positionable Doors.
All are less Trucks, Couplers & Decals.

STREAMLINED BACKSHOP

Sales ... Service ... Solutions ...

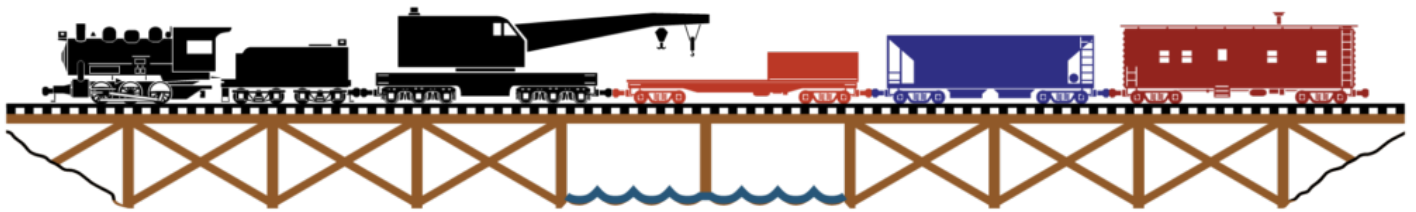


Tsunami 2 ?

WWW.SBS4DCC.COM



NEW TRACKS MODELING

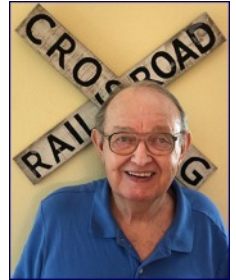


By Contributing Editor Jim Kellow MMR

“Modeler’s Path to Success”

Use a mentor’s past memories to help create your own and achieve your modeling successes.

“Try it. It works!”



Well the Holidays are over and we are starting Year 7 of New Tracks Modeling articles. We wish everyone a very productive and rewarding 2024.

I can’t believe this article starts my seventh year writing New Tracks Modeling, for *The O Scale Resource* magazine. Time sure passes fast, but every article has been fun for me to write and hopefully helpful to your railroad modeling. So here we go on our 2024 adventures.

A major New Tracks Modeling Announcement for 2024

Bob Davidson, the New Tracks Modeling Mentoring Scholarship Chairman, is pleased to announce that we have reached our initial 2023 goal to grant at least \$4,000.00 in scholarships in 2024. Bob also confirmed that we met the Anonymous Donors Challenge Grant match of \$1,000.00. These successes have fully funded two scholarships, each with a \$2,000.00 value to each recipient.

He is also pleased to announce that the [Pacific Coast Region of the NMRA](#) has donated \$2,000.00 to the scholarship program for 2023 to sponsor another scholarships for the 2024 year. This very generous donation has made us confident that we will be able to add one additional \$2,000.00 scholarship in 2024, for a total of \$6,000.00 in scholarships awarded. The other two scholarships will be funded by the generous donors of the New Tracks Modeling community.



Bob emphasized that we are now accepting donations for 2024 so we can expand the scholarship program next years. Your contributions will help young model railroaders as they

work toward achieving a college degree or technical school certificate. Remember, as a registered 501(c)(3) non-profit corporation, your donation to the New Tracks Modeling Mentoring Scholarship is tax deductible as allowed by law. [To use the Zeffy platform, please click here.](#)

To view a video of the official announcement by Bob Davidson on our December 27, 2023 Zoom show go to our [YouTube Channel: New Tracks Modeling](#). Bob Davidson, his committee, and all the Individuals, Companies, and Organizations who donated, deserve our sincere thanks and appreciation for making this announcement possible.

Now for some other New Tracks Announcements

Please Follow my Facebook Page Jim Kellow MMR by clicking [here](#) for breaking news about New Tracks Modeling. Something new is always happening for modelers like you.

Subscribe to our website newtracksmodeling.com to get all the current information about our future Zoom and YouTube shows, get a weekly email with the log in links for our Zoom shows, and receive our Newsletter. We currently have over 900 website subscribers and encourage you to join us. Or you can join us live on our [YouTube channel, New Tracks Modeling](#), or watch the over 1,000 videos of our past shows. We have over 1,650 subscribers. All our shows are live with segments presented by a great variety of modelers, manufacturers local clubs, organizations, and hobby shops. We hope you will join us. You are why we do these shows.

We started a new monthly Newsletter

“New Tracks Modeling Observations” |
Editor: Martin Brechbiel, MMR

On December 1, 2023 New Tracks Modeling introduced a new monthly newsletter designed to provide ideas, commentary, and insights from New Tracks Modeling Zoom, and YouTube participants and viewers, about our great model railroad hobby. We also plan to give advance notices about upcoming New Tracks Modeling Features.

If you are a subscriber to our website or a donor to New Tracks Modeling, or to our Scholarship program, you will automatically get this publication by email. If you are a subscriber to our New Tracks Modeling YouTube Channel you will be able to get a link to view the publication. You can also get a copy by visiting our Website: newtracksmodeling.com.

We hope you enjoy this newsletter and ask you to encourage your friends to become subscribers to our website newtracksmodeling.com or our [YouTube channel, New Tracks Modeling](#), so they can also receive it. Please contact our Editor, [Martin Brechbiel, MMR](#) with your comments, suggestions, a new product you have coming out in any scale, or if you want to publish your views and comments in a future issue.

Tom Yorke is back, and Frenchman’s River Models is now the exclusive producer for his new kits.

I recently saw a Facebook page announcing Tom Yorke is back designing new kits. As a modeler who admires Tom’s creativity, I believe this is great news. James and Anna Cleveland, owners of Frenchman’s River Models, said: “We at Frenchman’s River have enjoyed reintroducing Tom’s kits over the past several years and are excited to now be working exclusively with Tom to continue producing his amazing kits for many years to come.”

(Tom’s original post on Facebook). “Finally a new announcement! In the works for the past few months, but it can be announced now - I will be working with Frenchman River Models designing, making patterns, building pilot models for them and doing kit design for a line of new models to be sold exclusively by them. This frees me up from the production end of things. A major slow point for me. All future kits for structures in both O and HO will be handled by them and all sales will be through them. The last building kit that will be sold direct from me will be the A-1 TAXI Office. I will still produce special loco kits in On30 and Gn15 to be sold by myself.

Do to the above and an illness, the A-1 TAXI kit had been delayed, however, it is in production at last and will be shipped to those who have purchased one and have waited patiently for their copy. If you have ordered one, please PM me or send an email with your mailing address ebonydog17@gmail.com to insure you receive your copy.



I have several new designs ready for the next two years worth of releases, the first of which will be the turreted Spillane Building followed by two other models that I'm sure will please both two story town type structures from the prototype.

On the left is a shot of the next kit soon to be delivered to Frenchman River. I look forward to working with these fine people to continue my line." Welcome back Tom Yorke and thank you Frenchman River Models for bringing us some of Tom's great new kits.

Some Manufacturer's Contest Drawing Winners product comments.

I really appreciate these two readers responding to my comments in the last article asking for information about building the products winners won in the various Manufacturer's Contest Drawings. Thanks to both of these winners for their comments.

Michael Culham



I have finished the Bar Mills kit (Jerry's Small Engine Repair) that I won in the *OSR* draw back in the summer. While building it, I took some modelers license and changed a few things so it does not look like everyone else's that has this kit. The name of the business will be changed as well so it is different from the kit.

The kit was quite easy to build and only took about 20 hours in total. I would not mind building another of their kits down the road.

Thank you Michael.

Jim Miller

Hi, Jim. I have been enjoying the New Tracks Modeling shows on YouTube. In fact, I was a three-time winner of a drawing! The first was the Clever Models paper O scale Coal Dealer in July 2018! The reasons are varied, but there is really no excuse for it taking so long to reply. See pictures on next page.

If you still would like to see more, I can do that. The second win was in December 2021. Nick Santos sent me an envelope with I think four of his Nix Trainz Decoder Buddy's. I am very impressed with them and will undoubtedly have a use for one or more of them as I upgrade my small roster of locos.



And the most recent is the etched brass kit from Severn Models. That was this last February 2023. I finally got the kit in June. It is a head scratcher. Some of the parts, like the door hinges, are so small! But I am taking it slow and thinking carefully before each next step.

There will definitely be a short article coming your way. See *Building a Severn Models Apex Roof Garden Shed* in this issue.

As you may have noted, I have stopped the inclusion of Manufacturer's Contest Drawings in my articles. I have too much respect for the manufacturers I profile to ask them to give a free kit to a Contest Drawing winner who is not going to build it and share their model with you. If I keep getting information from past winners about their builds, I will reinstate them.



Now Let's meet some talented Railroad Modelers

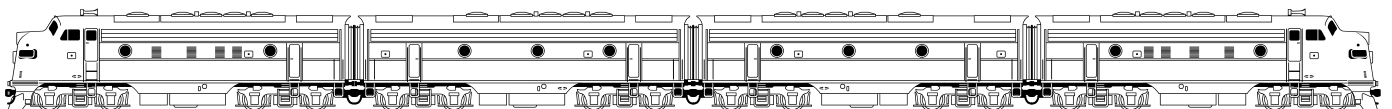
This first modeler is a passenger train collector who focuses on replicating transition era named trains from the American Midwest in fine scale 1/48 models. He also has extensive experience presenting descriptive articles in publications such as *O Scale Trains*, *Railroad Model Craftsman* and *The O Scale Resource*. With his exacting attention to detail, Santiago has effectively assisted importers in the production of several passenger train projects. Please meet Santiago Pineda.

Santiago Pineda

I had a late entry into the hobby, I got my first O scale piece of equipment in my late twenties. Quickly after, I was exposed to the high-end and became instantly interested. Over time, I have put together a small, but dedicated, collection. I enjoy building, modifying and painting brass models to make them look as close as possible to a particular prototype.

I can help modelers interested in making and editing photographic images of their models.

Here are two images I made on next page. Thanks Santiago for sharing your interest in our hobby. He can be reached at: Santiago.Pineda@newtracksm modeling.com.





Above: CB&Q E5s pull a wartime Exposition Flyer into the station. The Buy WarBonds program was advertised on a CB&Q PC chair car from 1942 to 1945.

Below: This 1938 Super Chief has been taxed with increased demand. Models by Key Imports, Protocraft, Golden Gate Depot and 3rd Rail.



This next railroad modeler is from the UK and models USA O Scale. He also likes this magazine. Dan Dawdy thanks you. Please meet:



David Rea

I am a fan of *The O Scale Resource* and *New Tracks Modeling*. I'm not sure I'm worthy to appear in these pages for my little work so far in US O scale modelling, but here goes. For the past 3 years I have been developing a shortline project based on New England shortlines in the Pinsley era, and have gathered a selection of locos and other items from O Scale Yard Sale and UK sources. I like the GE switcher locos and covered bridges! Also a pair of B&O K16 switchers.

The actual layout is planned and building started. In the meantime, a micro layout built from foamboard in Canada is used for demonstration & trials, DC & DCC. The American O-scale in the UK group is always helpful. ~ David & the cats. Roz says Hi too!



Thanks David for your interest and help. You can reach David at David.Reaa@newtracksmodeling.com.

Next, please meet a railroad modeler who doesn't consider himself an expert but doesn't hesitate to try to build anything he sees and likes. His confidence in his modeling ability makes him very special in my opinion. Please meet:

Ken Rimmel



I consider myself an average modeler. I do not have any awards for models I have built, mostly because they were mostly kit-built and I never placed any in any contests. The few scratch-built pieces I made are mostly finished and were never intended to be used in a contest. Most of what I do in my railroad hobby entails ready-to-run and easy-to-assemble, sometimes requiring slight modifications. I have enough skills and experience that I feel comfortable enough to work on most anything.

While I have a memory of playing with a small, molded rubber train that did not need track, I think my first real experience with model trains was receiving a Lionel 027 set for Christmas when I was six years old. I do have to say that it took a few more years before I played with it more often and began adding accessories. I still have that set today and amazingly enough, in spite of the many staged derailments, it is in great condition.

This photo of me was taken by my wife. I found the conductor's uniform in a local antique mall. It was last used on the Metra near Chicago. Consisting of the coat, pants and short-sleeve shirt that was in my size, I could not pass it up for \$45.00. I have since added the hat, vest, and pocket watch with chain. My career had nothing to do with railroads because I worked for the phone company. Sometimes I will wear the uniform at train shows.

My father helped me to understand instructions that came with kits that I purchased and those given to me. He also showed me some tips when things did not fit the way instructions claimed they should. The manual class provided by the public school system in my seventh and eighth grades showed me how to use various tools, but for the smaller tools needed for detailed and craft projects, I pretty much learned on my own and by watching videos.

Below Left: For the HO club I was a member of I built two plate-girder bridges. This one was for where part of the mainline went under a portion of a wooden trestle. Using information I found in a book written by Paul Mallery called BRIDGE & TRESTLE HANDBOOK, first published in 1958 and reprinted several times, I designed the bridges so that they would look realistic enough and fit the purpose.

Below Right: This underside view shows the cross-framing that gives the bridge its strength. Made of 248 pieces of wood and card stock and measuring a scale length of 112 feet, the bridge was strong enough to hold many times any weight the trains could ever place on it.



The easiest tool I perfected was a soldering iron. Before I entered high school, I was building radios, electronic clocks and other similar items. This skill came in handy when I started working for the phone company where soldering was still the primary way to make connections in their central offices. In less than a handful of years, those same connections were made with a wire-wrap tool.

Most of my learning to build included help from my father, school teachers, and watching others. I would say the bulk of it was still trial and error. It has been said that hands-on is the best way to learn and it worked for me. When you make a mistake, you then know to do it differently next time. I do have to say that watching television shows, videos, and attending clinics at train shows can be very informative, but doing it with your own hands will make that knowledge last forever.

My first train set was a Lionel 027, but when it came time to build my first layout, it was HO. The 5 x 9 foot ping-pong table was handy, but when someone wanted to play ping-pong, the Lionel had to be put away. Eventually that game saw fewer users, but the table took up too much room in the basement and I could not build something permanent on it. On a 4 x 8 foot table a reasonable sized HO layout can be built and enjoyed, and HO was very affordable. Since the late 1980s, my collection of 2-rail O-scale has grown. Because I am a member of a club that runs 2-rail O, I felt that I should acquire something that I could run at the club. HO still outnumbers space in my collection.

I have about a dozen memberships that include train clubs, museums, and historical societies. I and a couple friends of mine, back when we were in our early teens, quickly realized that it was nearly impossible to



The other bridge that was needed was for a shorter span and on a slight curve. Again I used information from Mr. Mallery's book for a bridge that could actually work in real life. The staining seen on the rails is a result of the dye used on the ties causing the steel spikes to rust and causing the corrosion on the brass and nickel-silver rails. This probably could have been prevented by rinsing the ties in several clear water baths before using.

start a club of your own and make it survive. At the time, we did not know of any clubs in our area we could join. The first organization I did join was the National Model Railroad Association in 1964.

In following years I joined their Mid-Continent Region, and later their local Gateway Division. My first museum was the National Museum of Transportation in Kirkwood, MO in 1969, where I have occasionally volunteered, and in the early 1980s I helped to restore the Frisco 1522. In 1987, I joined the Illinois Railway Museum as a supporter. In the early 1970s, I joined a fairly new model railroad club and they badly needed someone who could clear the shorts in their wiring and help make their trains run. My knowledge and experience in low-voltage systems allowed me to have the club layout running within a few days of work. About fifteen years later that club had lost their home, became a traveling, modular layout club, then ended up as a layout-less group of friends that occasionally meet and talk of old times. Late in the 1970s, I learned about the St. Louis Railway Enthusiasts from seeing a newspaper notice of their meetings. I joined at their next meeting. I have confirmed that this group is the oldest railway-related group in the St. Louis area having formed in 1932, and a number of their members are responsible for forming the National Museum of Transportation. Historical societies that I joined include Railroad Station Historical Society, St. Louis Terminal Railroad Historical & Technical Society, and The Railway & Locomotive Historical Society which is our nation's oldest railroad historical society.

I am a member of the two live-steam miniature railroads in my area; the Wabash, Frisco & Pacific Association which is the third oldest railroad group in the area, having formed in 1940, and for a few years I was the Superintendent of Motive Power and lead engineer. The other live-steam group is the St. Louis Live Steamers. In 1984, I joined the oldest model railroad club which is also the second-oldest railroad group in the area. The Big Bend Railroad Club, Inc. began from an in-house, after high school activity in 1938, and received permission from the Chief Operating Officer of the Frisco Railroad to use one of the two waiting rooms in the railroad's Webster Groves (a St. Louis suburb) depot. In 1994 when this club learned of the scheduled demolition of the depot, the club that was already incorporated as a non-profit corporation, purchased the building and signed a long-term lease for the portion of land the building sits on. Six years later, the club received a 501(c)(3) designation from the IRS and has been trying to raise the thousands of dollars needed to make many repairs and restorations to the 1910 depot. During my membership with this club, I have performed research and interviews with past members to learn as much of its history as possible.



This is the floor of a depot I began making that is patterned on a real one located at the National Museum of Transportation. The different flooring shows which side was for the agent and the other the baggage room. The square hole is where the chimney foundation goes.



This is the underside view of the floor showing all of the floor joists and cross-bracing. The bracing is made from a file card cut in thin strips and there are 96 of them.

I have also been its secretary for nearly my whole membership and had an article about the club published in the January 2019 issue of *Model Railroader* magazine. I joined these organizations to learn and share my experiences and knowledge. The most rewarding outcome was making new friends.

I can help with finding a club or organization that could be a good choice to join or seek information from, based on the interests of the modeler.

Thank you Ken for your interest and help. Ken can be reached at: Ken.Rimmel@newtracksmodeling.com.

This next Canadian modeler has lived in various cities and therefore has found many friends and experienced a wide variety of model railroading activities throughout his career.



Keith Stamper

My name is Keith Stamper and I live in the small Southern Ontario City of Port Colborne on the shores of Lake Erie and the entrance to the Welland Canal. I am a retired Food Packaging Systems Designer, and a current member of the NMRA Niagara Frontier International Division.

I entered the hobby in my native country of South Africa as a serious model railroader in about 1977 and began in N scale soon to discover HOn3 and Colorado Narrow Gauge. I began building a layout with the meagre offerings available to modellers in the distant land of my birth.



Over the years, I have always been in model railroading and have never lost interest nor abandoned the hobby. I have always modelled in Narrow Gauge and only Colorado Narrow Gauge.

In 1983, on immigrating to Canada when my company transferred me, I switched to On3 and met several modellers in Narrow Gauge all working in On3. I sold my HOn3 collection and invested in On3 DRGW equipment.

Once I had established my new life in Canada and purchased a home, I began building a layout in On3 that filled the 1500 ft.sq. basement. My layout depicted Chama to Cumbres Pass and was analogue control with PFM sound and SD&S Wireless control.



I was offered a transfer from Canada to the USA and my family and I moved to the Chicago, IL area where I met several Narrow Gauge modellers. A new On3 layout ensued and once again, the DRGW Chama to Cumbres Pass was my chosen locale.

Several years later, I was relocated to Dallas, TX. and another new layout was begun as I had sold off the Illinois layout to a local modeller.

I met several Sn3 modellers in the DFW area and soon fell in with these talented folks. Of note is my dear and close friend Marc LaChey.

Finding a home in the Dallas area with a basement was impossible and I had to settle on a home with a large “game room” for my On3 layout and this forced me to compress my layout to fit into a small 20’ x 16’ room. I chose to model the RGS with Ridgway as my focal point and built an out and back layout.

As retirement began to loom on the horizon, I decided to relocate back to Canada so that my Canadian wife could be near her family, and yet again, a new layout was begun depicting the RGS operation from Ridgway to Dolores. Once I had this layout up and running, I made a decision to try Sn3 and tore out the On3 layout to build in Sn3.

My adventures in Sn3 lasted about 3 years before the desire to model in the larger scale became strong and I realized I had to go back to On3.

With retirement imminent, I spent some time considering what would be my final layout, and after a lot of looking at my various books and literature, I knew that Colorado Narrow Gauge would be my preference but which railroad???? I enjoy small locomotives and the Colorado and Southern interested me.

My wife and I relocated to our current home, and I retired with a 42’ x 12’ room for my Colorado and Southern style Railroad.

I decided to switch to Power On Board and after having sold off the Sn3 equipment, I invested in some On3 Colorado and Southern brass locomotives.

I purchased all my locomotives in unpainted brass and converted them to Power On Board before painting them.

I also own two RGS locomotives and converted one to Power On Board so that I could run RGS trains on my layout.



What have I accomplished in the hobby.....



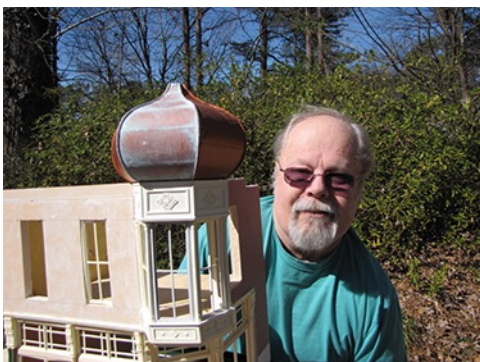
I am an independent person and prefer to do everything in the hobby myself. Consequently, I learned to build a layout from scratch..... given that I have built several, this last layout was built based on all the skills I had acquired over the now almost 50 years in the hobby.

Last year, I decided to pursue my MMR and have earned AP awards for Scenery, Civil Engineering and Cars. I am currently working on Locomotives and will scratch build a Mack Railbus.

My skillset in the hobby includes the following:

- Design a layout with CAD or pen and paper that fits the desired space and provides operation. Not just continuous running.
- Finish a room to house a layout with drywall, lighting, lighting, and electrical outlets.
- Build benchwork such as L Girder.
- Prepare roadbed such as spline.
- Hand lay track including turnouts without the aid of a jig such as Fast Tracks.
- Wire a layout for either conventional block control or DCC.
- Build hard shell scenery.
- Paint a backdrop.
- Make trees.
- Build structures from scratch or kits.
- Build all my rolling stock either from scratch or kits.
- Install Power on Board and DCC into my locomotives.
- Paint and weather my locomotives.
- Design an operating system based upon my layout using JMRI Operations Pro.
- Host operating sessions for my Narrow Gauge friends.

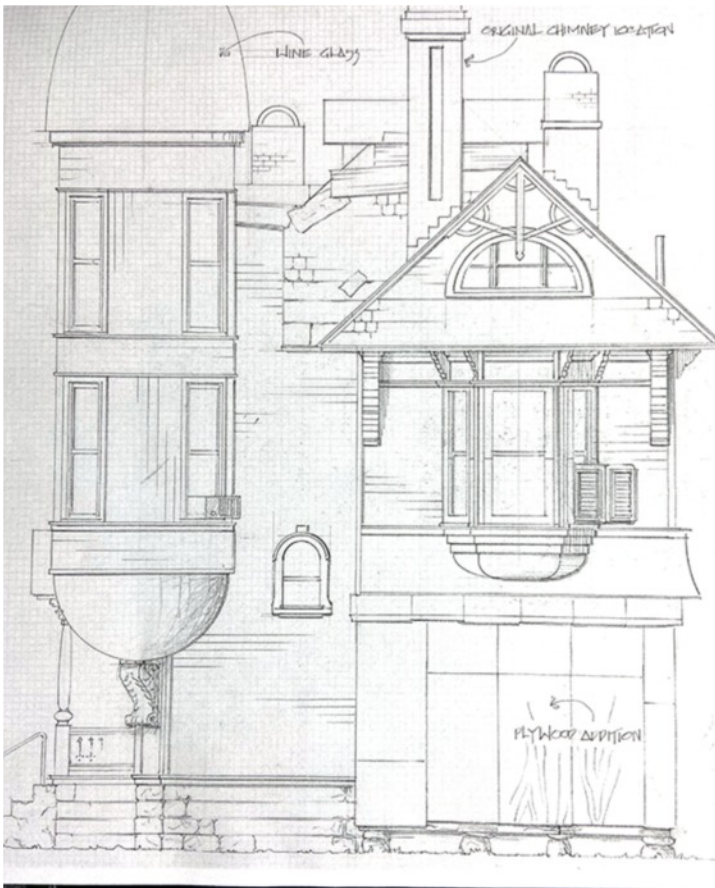
The hobby of model railroading has been my foremost interest and I have spent many enjoyable hours and made countless friends. Thanks Keith for your help and interest. You can reach Keith at Keith.Stamper@newtracksmodeling.com.



Following is the start of an article by a truly gifted modeler. He is a legend among modelers and model kit manufacturers. He will be building his Angel's Funeral Home in segments because that is how he has time to do it. Please read segment one and two below. Thanks, Tom, for this opportunity to share your modeling.

Tom Yorke Builds his "Angel's Crest Funeral Home"

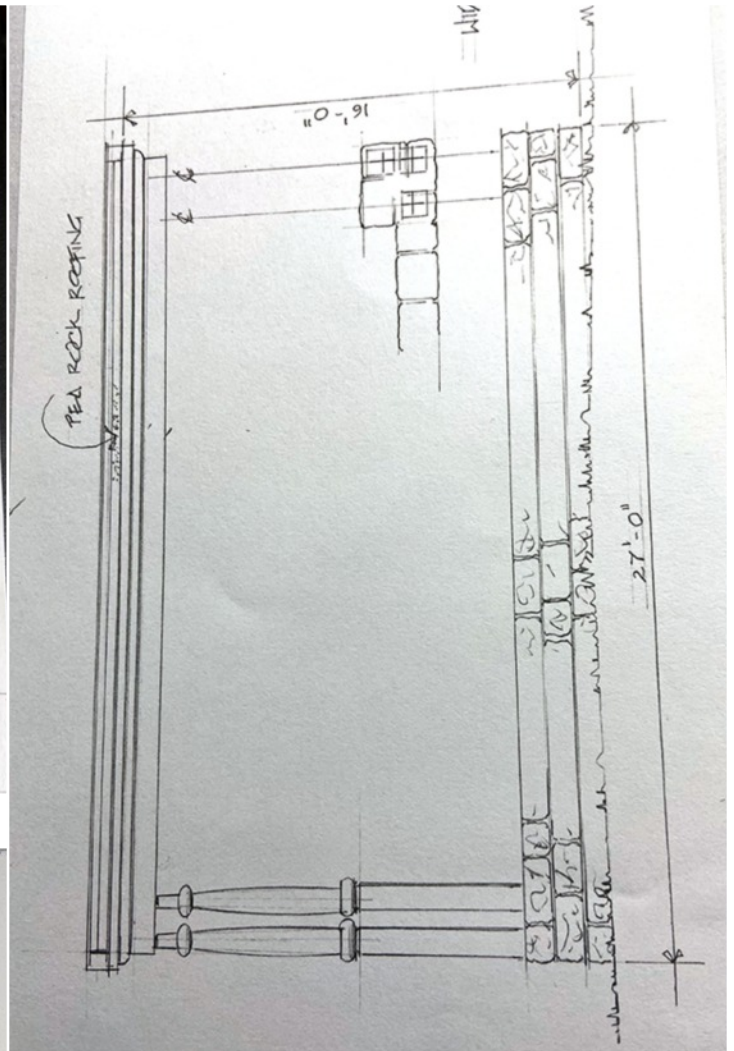
Several years ago, a friend asked me to build him an old Mansion. After some thought I decided to do an old house that had been rebuilt into



a funeral home. He loved the idea and gave me to go ahead. This article is about the construction of said model, complete with the James Bond Dr. No LaSalle hearse, but with the focus on discussing building methods, materials and ageing, rather than a complete “how to”. Bits and pieces of the article can be used to further one’s skills, rather than copying the model in total.



After many hours of research, I finally decided to put pencil to paper. What I came up with is captured in the

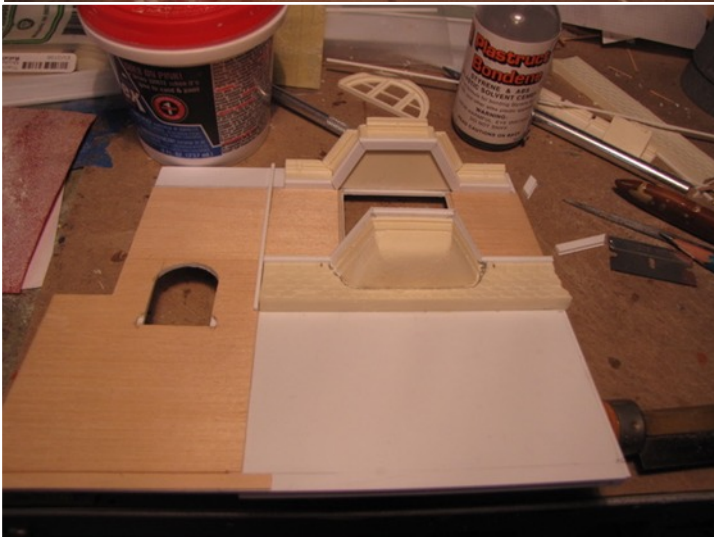
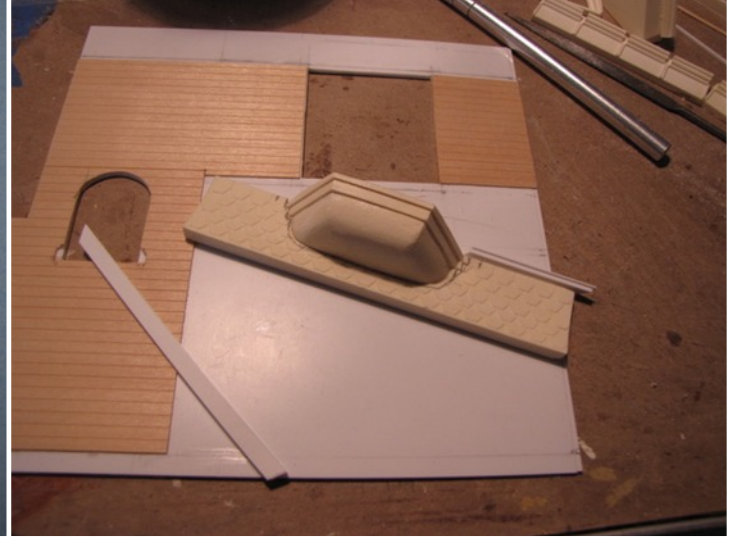


front elevation shown here in its original form. I made rough drawings of the other elevations to test the design, and finally chose those printed here. I built the model from those rough sketches. The scale drawings came after the fact to illustrate this article. Changes were made to my original sketches as things progressed, and the final version is shown here in finished photos. The model was a huge undertaking (no pun intended). Many parts were cast in resin from my own patterns. The model reached its final form in 3D and not in the drawings. By that, I mean one part was built and that determined the next stage and so on. The final design was worked out on the model, not in the drawings. This was true especially in the roof and the designs of the wall top edges. Sometimes it's difficult to draw what actually needs to occur. It needs to be worked out in 3D.

I wanted a corner tower on my model. It needed to be topped with an interesting roof. I looked in many stores for a cheap wine glass to

use as a pattern. I finally found the perfect example and purchased it. I carefully filled it with Hydrocal and after it set up, I broke the glass to reveal the perfect topper! Sometimes one must think out of the box. The glass itself was expendable. The articles that follow will show in photos the process and details of construction. This is a large article, so hold onto your hats as we go along.

Building the Angel's Crest Funeral Home Part 2

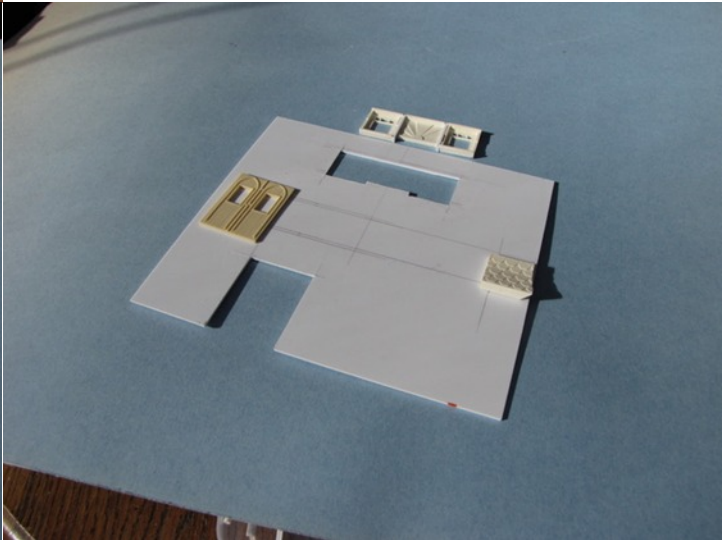
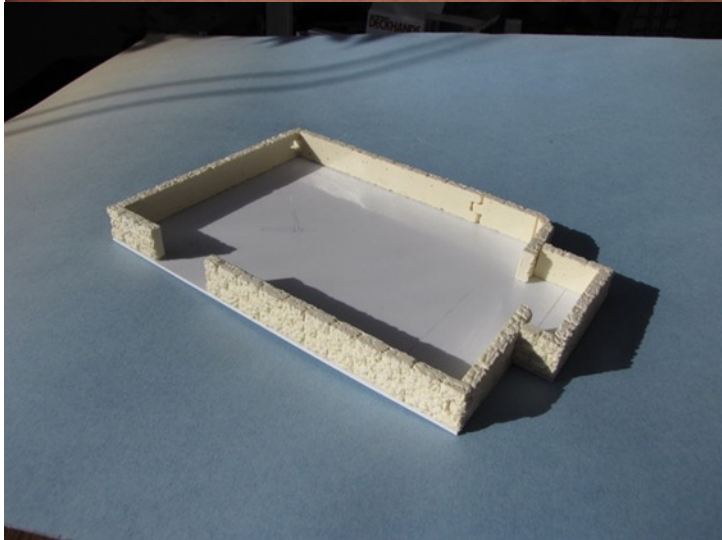


This part of the story will discuss the assembly of the walls. All of the walls are similar in design and construction so I will key in on one wall's assembly and show the others as finished. The resin parts done from my own patterns are pictured in a yellow tone. The styrene is white. All walls started with a styrene base of .040" thick. To this was added sections of 1/16" scribed basswood. The sheets were CA'd in place with the edges sealed in Plastruct Bondene. All windows, tower sections between windows, belt between floors, belt at wall top and corbels were cast from my molds. The "eyebrow" window as well as the "sunray" square between two windows were also cast. Horizontal moldings were formed with pieces of



styrene bonded together to form the final molding shapes. To say this was a complex model is an understatement. But taken in segments, one by one it wasn't really that difficult or complex. It just took a lot of thought and some trial and error!

After the home was designed and drawn on paper, construction was started. The first order of business was the foundation. I made a pattern for a stone strip of the correct height and made a mold. I cast several sections of the part – enough to complete the foundation. The pieces were carefully fit together and glued to the base, being sure everything was square and the top level. The wall sections were built one at a

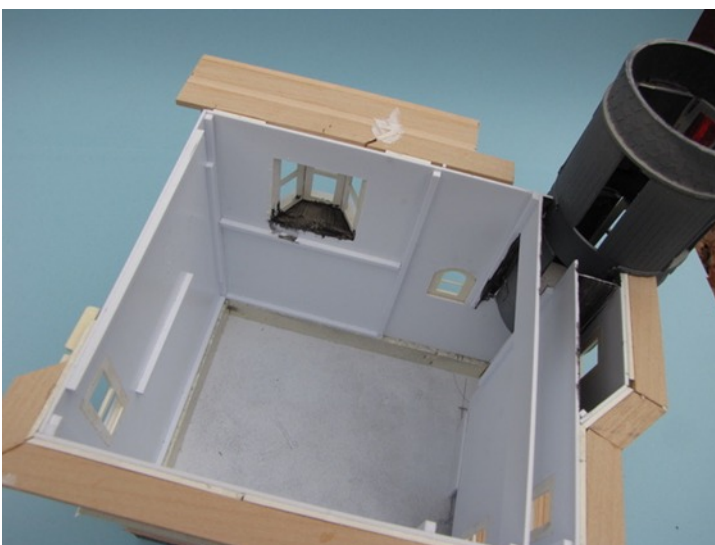


time and finished except at the corners. These were carefully done after assembly since parts needed to be mitered together. I started with the carport wall since it was the simplest and it became my test area. This was where all pieces were figured out and carried around the structure. Most of the photos in this section concern the opposite wall with its bay window and cut out section for the tower.

The tower was started by choosing a piece of round tubing. In this case a 2-1/4" diameter tube in plastic was chosen. To these little sections between the window levels, small sections of styrene were added top and bottom



to form decorative “rails” around. Card stock shingles were added between these strips. The three little round sections were finished. The two window areas between these sections were built using sections of window and wall units cast in resin. These were carefully bonded to the circles, piece by piece, until each level was finished. Care was taken to align these sections atop one another so all windows aligned properly. Next came the bottom round. This was made from a piece of Styrofoam in the form of an egg. The bottom was cut off and covered in Spackling Paste. After sanding, it was cut as in the photo, to tuck into a slot between the front and side walls. This slot was a trial and error question.



Cut a little and fit, then cut some more until it fit properly. Make small cuts. You can always cut more, but you cannot add back! The roof was made from a wine glass I found on sale in a home store. I filled it with plaster and when dry, broke the glass to reveal a beautiful dome of the proper shape and size! The dome was scribed to form line between the “copper” sheets. The finial was a doll house fitting.

OK, let’s return to the walls. The next photo shows the bay window wall under early construction. The cast belt rail with its curved section and shingles is pictured with the bottom casting of the bay. This must be fitted together to for a seamless transition. The styrene belt rail sections are shown. Careful measurement was used to locate the upper section of the bay so the windows fit properly. The upper section of the wall trim is shown with slots cut for the corbels. This was a tedious job. Here the windows are in place with round tubing between them. The cast corbels are in place. I used large sections of 1/8” thick basswood for the section under the roof overhang. Very large corbels were made to support this big overhang. These were made from styrene stock. Flat pieces, round sections, more flat pieces until the desired shape and size was attained. I filled all holes and cracks with spackling paste and sanded the pieces flat. These were bonded into place. Here is a shot of the inside assembly showing the bracing used.

The walls continued until all were finished. This is a shot of the addition to the side of the mansion to transform it into the new use as a funeral home. It is covered in thin aircraft plywood over styrene base walls. The floor was probably over detailed, but at the time, I wasn’t sure what might show on the finished piece. The rear addition lower level is covered in scribed wood. The bracing is shown over the top edge so the next level



has a base and guide. This is a shot of the carport wall. The notch is for the brick chimney. The large opening at ground level is for entry and egress of “clientele”. A few more shots of the assembled exterior walls.

We still have to cover the carport and front porch, as well as the roof and painting and weathering. We have a long ride yet. The roof was a real challenge! Thanks Tom. We all look forward to the next segment. You can reach Tom at: Tom.Yorke@newtracksmodeling.com.



Next is a West Coast modeler who has served in many leadership positions in the NMRA, including being the current President of the Pacific Coast Region. I recently learned he also loves playing the guitar.

Frank Markovich MMR

Frank did not start out being a model railroader, but rather a model builder. But he did get an American Flyer train set as a child that he shared with his two brothers. They were more like Gomez on “The Adams Family”. Started out just running the trains in an oval and then put-up wood blocks to knock them over. This didn’t last long, and soon after this Frank received his first plastic Revell kits. Mainly, military and some auto kits. From there, he went on to build control line airplanes, and with his cousin Ray, would fly RC planes. He was good at building, but not very good at flying and was frustrated after spending hours building an airplane to have it crash on the first or second flight.

College came along. One day he wandered into Franciscan Hobbies in San Francisco and started looking at trains – it immediately connected – they don't crash and have lots of challenges for modeling. He was hooked, but didn't know where to start. He built a small 4' by 8' layout in HO and ran trains for hours at a time while studying. He realized he needed scenery and structures and bought his first Campbell kit and some Central Valley Car kits, all in HO. While at another hobby store, he saw some structures built by Colin Emerson and contacted him. Colin took him to a Coast Division of the PCR meet at Riodan High School in San Francisco. There he met Mic Greenberg and Gary Nash. He now had a group of friends who were great structure builders. Colin and Mic helped Frank with advice on his first scratch-built structures. Frank entered them in a contest and, at first took 2nd and 3rd, but grew and finally received some first-place awards.

About the same time as this, Frank met his wife (Susie) of over 40 years and they were married in Sonora, California, not far from Tuolumne, where Westside Lumber was located. Frank had by this time started to really love narrow gauge and particularly logging, and after getting married, started to build a 2nd much larger layout in HOn3. He loved the small, geared loco's and found that they just didn't run all that great. At a PCR event in Santa Rosa, he watched an Iron Horse On3 T-boiler shay just crawl back and forth on a track. That was it – he switched to On3 and has never looked back.

That layout was never finished, as after two children (Frankie and Michael), the Markovich family moved to Belmont, California from Daly City, California. The new house did not have an ideal place for a layout so Frank had a basement room added. The contractor removed over 40 yards of dirt and rock and redid the foundation, added bracing to the house and poured a concrete slab. Frank finished off the room himself. With permits etc., this took over 4 years to complete.

Then Frank and Susie had a daughter Christine. Between Frank's work and the three children, not much was done on the layout for some time. Frank worked as an electrical engineer and has taught music at Skyline Community College in San Bruno, California.

As the children got older, Frank was able to have more time to work on his layout. It is based loosely off of Westside Lumber, but named Twain Harte and Sonora Pass RR. Frank and his family have a cabin near the old Westside Lumber in Twain Harte, California, about 8 miles from West Side, 5 miles to Pickering and 12 miles from the Sierra RR.

Here is some information on the Layout (Twain Harte and Sonora Pass RR):

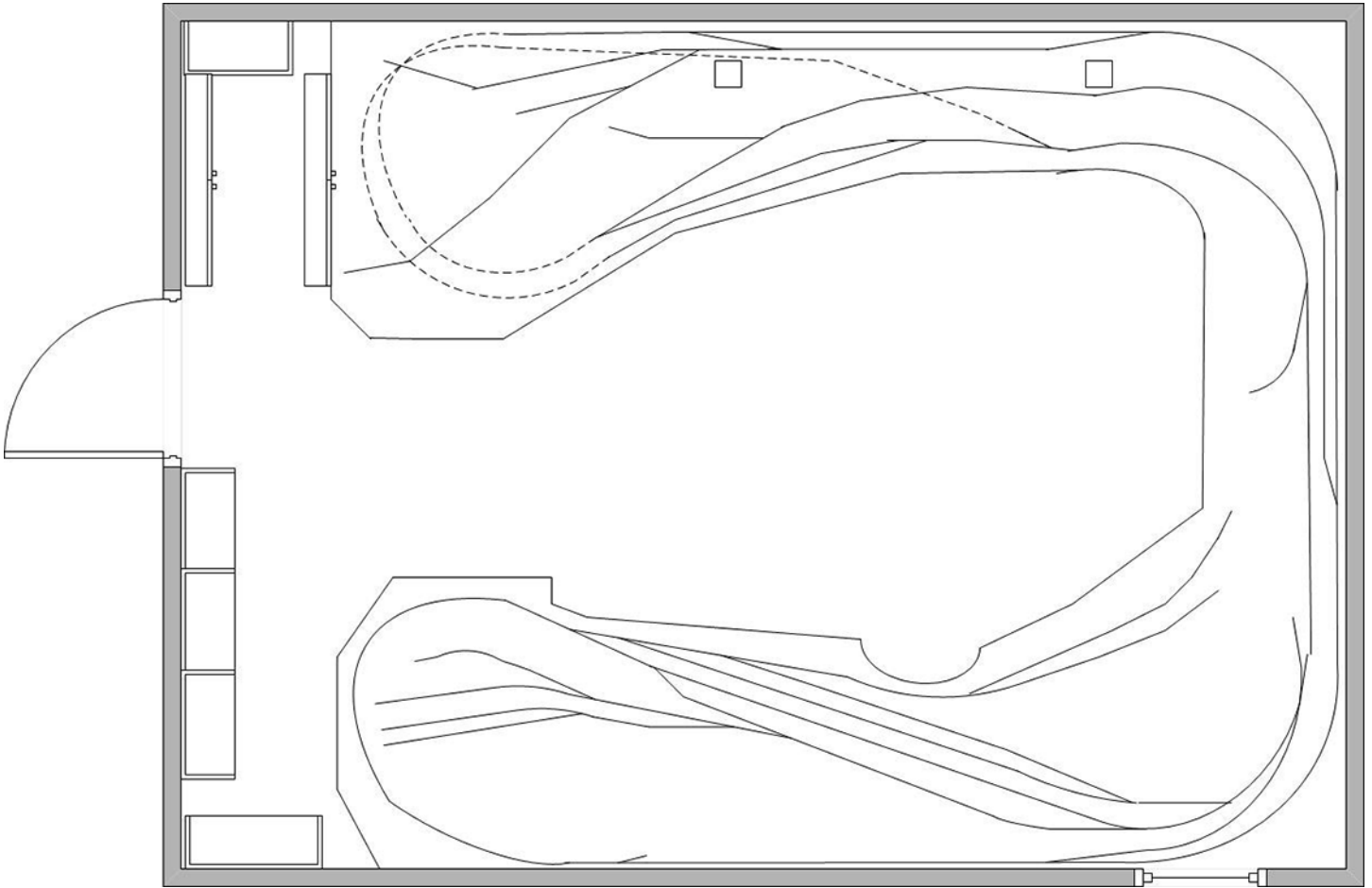
Vision:

Logging railroad set in late 40's in foothills and Sierras. Center point is Twain Harte – just north of Yosemite Park. Railroad heads east towards Beardsley Lake.



Mission:

To represent what a logging line might have looked like in the Twain Harte area. The railroad is based loosely on the West Side Lumber and Pickering Lumber Companies, along with other logging railroads in the Sierras. Era modeled is late 40's early 50's, scale On3.



The layout is about 95% complete and was featured in the *Narrow Gauge and Short Line Gazette* Nov/Dec 2010. The layout is in a 16' by 22' finished room. Frank is also a member of the On30 modular group – The Yosemite Short Line.

Soon after this Frank earned the Golden Spike, and then with encouragement from many including Jack Burgess and Bob Brown, Frank went about getting the necessary awards for the MMR. He had already had volunteer and author as he ran contests and youth programs for the division and PCR and wrote numerous articles for the *Gazette*, *Coast Dispatch* and the *NMRA magazine – bulletin* (at one time he had a regular column on Narrow Gauge). Frank also served as the division superintendent of the Coast Division of the PCR.



In order to get the MMR, Frank did a project plan that mapped out each step needed for each award, down to small details. He tracked that weekly and was able to finish in a couple of years' time. Frank found that to complete the various categories was both a challenge and a learning opportunity. He found that he actually liked scratch building switches as an example. He was able to earn the following awards: Structures, Civil, Cars, Scenery, and Electrical along with the Author and Volunteer. Frank is now involved



in the leadership of the Coast division of the PCR and has retired from engineering, but not from teaching. Frank and Susie now have nine grandchildren, and the older ones love to watch his trains run and to ride on full size trains.

Frank has since become a Director for the Coast Division and has been elected to Vice President of the PCR. In 2021, Frank became PCR President. He has built 3 “Build a Memory layouts” with Mike Blumensaadt for the Coast Division - 2 in ‘N’ gauge and one in HO. These are used for recruitment at various train shows. He was an active member on the NMRA “Recruitment and Retention Committee”. He has attended numerous NMRA conventions and has won first place in over 8 categories at the National Conventions. He has also attended other model railroad conventions and won first place for models, including “O Scale West” many “National Narrow-Gauge Conventions”, “West Side Reunion” and many PCR and Coast division meets.

Frank has written articles and reviews for many magazines in the Model RR press and in the Music Press, including: “The Narrow Gauge and Short Line

Gazette”, “N Scale”, “NMRA Bulletin (and subsequent names), and others. All of this, along with a column each issue of the PCR Branchline and the Coast Division Dispatcher.

Frank is now retired and besides modeling, he spends lots of time with his children and nine grandchildren. Thanks Frank for all your help and sharing your experiences. Frank can be reached at:
Frank.Markovich@newtracksmodeling.com.



CatzPaw Innovations LLC Surprise

I will be writing about their new system for moving things other than trains in the next issue of this magazine. This is the type of system I think I have been looking for to move my Motorcycle Club members and my farm equipment. Congratulations to CatzPaw for developing this system. Read more about the company and their invention next month. I think you will be glad you did!

Meanwhile, here is what I just got from the company.

CatzPaw Innovations LLC designed, 3D printed, and started selling a Big Foot figure in 2014. From the very first sale, customers have asked CatzPaw to make Big Foot move through the woods. They have spent the last nine (9) years trying to make that happen...

They are proud to announce the release of the InvisaTrax™ Transport System. A system that makes it possible to move things! Lots of things in the most popular scales.

CatzPaw has launched a Kickstarter campaign to fund the manufacture and distribution of the InvisaTrax™ Transport System. The Kickstarter ran through the month of October 2023. For more information about the Kickstarter campaign and InvisaTrax™, follow this link: <http://kck.st/3PGeB2m>

YouTube show video: https://youtu.be/xkSbP3je0yo?si=Km_i7DiRkD7LqNvD

Battery Power?

Steve Sherrill and his guests will tell you all about it.

Steve Sherrill began a new series on the September 27, 2023 New Tracks Modeling show on the installation and use of battery power for motive power operation. He and his guests will show how to get started with basic battery power. Steve uses some very basic equipment to show how easily battery power can be used with DC, and DCC. If you plan to consider battery power in the future, don't miss Steve's presentations.

Based on feedback I received from viewers about Steve's first battery power segment, they are going to be a huge success. If you miss any of his live presentations, you can see them on our YouTube channel New Tracks Modeling. If you have any questions, contact Steve directly at: Steve.Sherrill@newtracksmodeling.com.

New Organizational Sponsors for New Tracks Modeling. Thank you to these new sponsors for their interest and financial support:

[Brennan's Model Railroading](#)

[O Scale Central](#)

[National Association of S Gaugers](#)

[National Capital Trains](#)

[Mainline Hobby Supply](#)

[New Creations Victorian Railroad Buildings LLC](#)

[Millhouse River Studio](#)

Thank you for joining our New Tracks Modeling Sponsor team. Your financial support is greatly appreciated. We look forward to working with these organizations to promote modeling and mentoring in our great hobby.

New Tracks Modeling’s Monthly Newspaper Column is Reaching a Potential New Model Railroading Audience.

I told you we are doing everything we can think of to promote railroad modeling, and mentoring, and I had article published in the November 24, 2024 *Citrus County Chronicle Newspaper*. Sure wish we could get this article taken up by the Associated Press (AP) and published nationally. Any ideas?

https://www.chronicleonline.com/lifestyle/entertainment/new-tracks-opportunities-open-for-scholarships-donors/article_9c0f1bcb-af57-55ff-a478-b59980faaaf.html

Wouldn’t it be great to have articles like this written by model railroaders in newspapers all over the country? What a boost this could give our hobby. What great past childhood memories of their model railroading might people remember that would cause them to restart their participation in our great model railroad hobby?

I hope many of you will write articles for your own local newspaper. If your newspaper is like mine, they will be glad to hear from you. It is up to all of us to spread the word about our fantastic hobby, one newspaper at a time. If any of you get an article published, please let me know so I can include you in a future article. Got a question or need help getting an idea to write about? Email me: jimkellow@newtracksmodeling.com. I will be glad to help you get the message out.

A monthly Series focusing on specific Model Railroad Scales: N Scale, HO scale, S Scale, O scale, O Gauge Hi-Rail, and G scale.

I have had many discussions with modelers who say things like: “What is scale (X) all about? Does anyone really model in (X) scale? Can I scratchbuild a model of ?? in (X) scale?”. (X) scale can be G, O, O Hi-Rail, S, HO or N. So we decided to start a monthly segment on G, O, O Hi-Rail, S, HO, and N Scale hosted by knowledgeable talented modelers in each scale to try and have your questions answered, and information given about what is possible, along with things a new modeler entering a scale might need to consider.

G Scale Modeling hosted by [Steve Bittinger](#) Sponsored by [New Creations Victorian Railroad Buildings LLC](#)

O Scale Modeling hosted by [David Schultz](#) Sponsored by [O Scale Central](#)

O Gauge Hi-Rail Modeling hosted by [Dennis Brennan](#) Sponsored by [Millhouse River Studio](#)

S Scale Modeling hosted by [Timothy Huebner](#) Sponsored by [NASG](#)

HO scale Modeling hosted by [Ed O'Rourke](#) Sponsored by [Mainline Hobby Supply](#)

N Scale Modeling hosted by [Clem Harris](#) Sponsored by [National Capital Trains](#)



**MODEL TRAINS
MAINLINE
HOBBY SUPPLY**



2024 monthly dates for each scale are shown below and are available on our website.

January	3 rd	O/O Hi Rail	10 th	HO	17 th	N	24 th	S	31 st	G
February	7 th	O/O Hi Rail	21 st	HO	14 th	N	21 st	S	28 th	G
March	6 th	O/O Hi Rail	13 th	HO	13 th	N	20 th	S	27 th	G
April	3 rd	O/O Hi Rail	10 th	HO	10 th	N	17 th	S	24 th	G
May	1 st	O/O Hi Rail	8 th	HO	8 th	N	15 th	S	29 th	G
June	5 th	O/O Hi Rail	12 th	HO	12 th	N	19 th	S	26 th	G
July	3 rd	O/O Hi Rail	10 th	HO	10 th	N	17 th	S	24 th	G
August	7 th	O/O Hi Rail	14 th	HO	14 th	N	21 st	S	28 th	G
September	4 th	O/O Hi Rail	11 th	HO	11 th	N	18 th	S	25 th	G
October	2 nd	O/O Hi Rail	9 th	HO	16 th	N	23 th	S	30 th	G
November	6 th	O/O Hi Rail	13 th	HO	13 th	N	20 th	S	27 th	G
December	4 th	O/O Hi Rail	11 th	HO	11 th	N	18 th	S	25 th	G

Subject to change

MONTHLY SCALE SERIES SCHEDULE

If you are interested in discussing something specific about one of these scales, please let the host know and tell him what you want to know and who you would like to hear from. It's up to you to help the host decide what these scale segments discuss and who are guests on the segments. Please subscribe to our website: newtracksmodeling.com so you don't miss any of these discussions on our Zoom shows.

“The Economics of the Model Railroading Market”

This segment will be hosted by Bernie Kriger, owner of National Capital Trains. The first monthly segment will be on our January 10, 2024 Zoom show. There are three pieces of the model railroading market – the modeler, the retailer, and the manufacturer/distributor. The economic issues facing each of these groups determines the health and viability of our hobby. Bernie has a long history of consulting with private companies on economic issues and as a retailer and modeler in our hobby. He is extremely well suited to host this monthly segment and try to keep us up to date about the issues facing our hobby.

Please contact Bernie with your questions, comments, and opinions about model railroading and any specific areas you would like him to discuss. We know that Bernie will improve our knowledge of the hobby's economic situation and what we can expect in new products, pricing, distribution channels, and manufacturing technology. Bernie can be reached at Bernie.Kriger@newtracksmodeling.com.

“Setting the Stage with Scenery”

Starting in January 2024, Bob Geldmacher, Chief Scenery Clinician at Scenic Express, will be presenting a 15 minute segment twice a month about using scenery to set the stage and enhance our model railroads. As we all know, scenery plays a vital roll in creating the scenes that help to make our model railroading an art form. Bob will discuss a variety of products and demonstrate techniques that can help your scenery come alive. Please contact Bob with any suggestions about subjects you would like him to cover. You can reach him via email geldy@aol.com or call at 410-926-4514.

What other new segments do you want on our Zoom shows?

Well before we know it, 2024 will arrive. I am in the process of developing new segments for our Zoom shows and need your advice and ideas. What do you want to see? Please let me know. In the past, I have tried to provide every show segment suggested by a viewer and want to continue to do so. My email is: jimkellow@newtracksmodeling.com. I look forward to hearing from you. In the meantime you will have to tell Steve Sherrill in his segments: "What do you want to talk about?" You can email him at: Steve.Sherrill@newtracksmodeling.com

You, the New Tracks Modeling's Team of Volunteers and Donors Help Make NEW TRACKS MODELING Zoom Shows Possible.

Thank you so very much for all the financial and volunteer support New Tracks Modeling receives for our Wednesday shows. It is obvious to me that "YOU", the supporters who finance and the volunteers who produce the shows, make presentations, and do all the many jobs necessary to make our shows possible, are doing an outstanding job. I know this because of the favorable emails from viewers, the growth in the number of subscribers and viewers, and the interest shown for our programs by the model railroading community. Thank you all so very much. It is all of you who make New Tracks Modeling the show it is today.

I truly hope each of you are as proud as I am of your contributions and achievements that are helping create New Tracks Modeling become the modelers and mentoring place to be for current and future model railroaders. This is what sets us apart: "Mentors Helping Modelers Build". I believe the great part is we are only getting started in helping the younger modelers develop into the modelers and mentors of tomorrow. With your continued help, we will have a lot more coming.

Two ways everyone can help fund our New Tracks Modeling Zoom Shows out of pocket costs:

1. Please Donate to our New Tracks Modeling Patreon Account



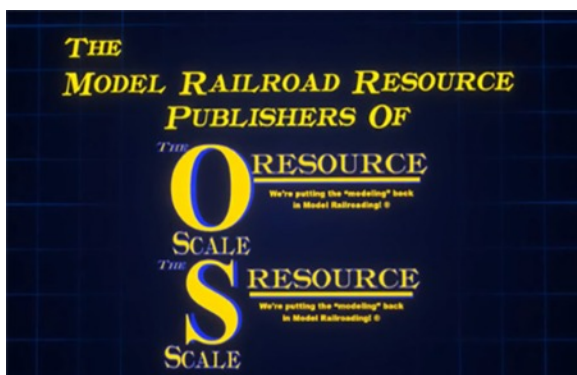
[Donations to Patreon](#) are not associated with our Scholarship program or personnel costs, but rather cover the out of pocket costs of just getting our Zoom, and YouTube shows produced, our Website developed, maintained, etc. [We have a Patreon account, NewTracks Modeling](#), for your donations to help fund these costs. We hope you can make a financial contribution. Please press this link to donate to help pay for our New Tracks Modeling shows.

2. Monetize our YouTube New Tracks Modeling Videos

We also have a [YouTube monetized New Tracks Modeling](#) account. If you watch the advertising YouTube places on our videos, we earn a little money from YouTube. Thank you in advance for your help in watching these advertisements. We hope you enjoy and learn something from each one.

NewTracks Modeling "MY BUILD" – Sponsored by [Model Railroad Resource, LLC](#)

Starting in January 2024, the "MY BUILD" segment will occupy more of a monthly show as long as we have sufficient modelers who want to show us their modeling. Here is the list of the MY BUILD shows for 2024 and the special focus for each show.



- **January 17** – Free for all! Anything goes!
- **February 21** - Oddities. Aliens, UFO dealership (for example), steampunk, a jackelope skull on the front of some oddball, backwoods engine (another example), non-prototypical trains, depressed center flatcars.
- **March 20** – Free for all! Anything goes!

- **April 24** - Spring. Scenery, flora, vegetation, trees, something wild, flower boxes, vines, backdrops, planting crops, world awakening after winter, greenhouses.
- **May 22** – Free for all! Anything goes!
- **June 19** – Water. Waterfront buildings, wharves, boats, covered bridges, water tanks, anything water related.
- **July 24** – Free for all! Anything goes!
- **August 21** - Harvest. Farm equipment, grain elevators, hopper cars, mills, tractors, agriculture, barns, chicken coops, livestock, cattle pens/ranching, cattle cars, reefer cars.
- **September 18** – Free for all! Anything goes!
- **October 16** - Halloween. Haunted houses, abandoned buildings, abandoned railroad cars, scarecrows, derelict engines.
- **November 20** – Free for all! Anything goes!
- **December 18** - Holiday. Santa, Christmas billboard cars, snow scenery, snow plows, people ice skating, holiday lighting, holiday decorations.

The main purpose of our MY BUILD is to provide a platform for modelers to showcase their past and ongoing projects, highlight their achievements, and seek advice or assistance if needed. To make things more exciting, some months MY BUILD includes “challenges”. These challenges typically revolve around seasonal themes and aim to encourage a diverse range of projects within the modeling community. Additionally, these challenge shows are open-ended in order to include any other models a viewer wants to share.

These segments are designed to be supportive and non-judgmental so modelers can help each other learn and develop their modeling skills. We hope allocating the MY BUILD more time in our monthly show will provide modelers with the opportunity to have more extensive and in-depth discussions about their projects.

Viewers of New Tracks Modeling are encouraged to send in one or more photos of their modeling to the show's host, Chris Coarse, railrunner130@hotmail.com in advance of the next show. Chris will organize these photos into a PowerPoint slideshow. During the show, each participant is given the opportunity to discuss their slides. They can share valuable tips, discuss techniques, answer questions, or pose their own questions about something they want to learn. MY BUILD is designed to serve railroad modelers of all scales, gauges, and age groups. Everyone is encouraged to participate. Chris is the owner of [Conowingo Models](#) and welcomes any of your comments or suggestions for the MY BUILD. See the modelers and their models shown on the November 22, 2023 MY BUILD in this issue.

NewTracks Modeling “BUILD ALONGS”

Frenchman River Model Works

Starting January 10, 2024, Frenchman River Model Works Build Along with Tom Farrell building two kits. A Lobster Boat and the Lobster Shack. There is a 20% discount on the HO and O Scale Lobster Boat and Lobster Shack kits, starting September 1, 2023 and ending February 15, 2024.

To get the discount use the code:
NEWTRX.

For more information about these and other products please visit their website.



AXM Paper Models

This next Build Along will provide something new for your model railroad as well as teaching you some new modeling skills and techniques using card. Starting January 24, 2024, Alfonso X Moreno, owner of the AXM Paper Space Scale Models website and self-taught designer of paper models in the Space Category, will start the Build Along of his SpaceX Dragon in 1:48 scale. You can download the paper model of the SpaceX Dragon in 1:48 from his website: <https://axmpaperspacescalemodels.com/>



The photo shown is from the redesigned Dragon 2 model. The model used for this presentation is my prototype.

Brennan's Model Railroading

Dennis Brennan's company also sells ballast to his customers who say it is the best ballast they have every seen for their O scale/gauge layouts. Starting January 31, 2024, Dennis will begin a Build Along of ballasting track using his ballast. To work on ballasting your track along with Dennis, you can order his ballast and get a 10% discount up to two weeks before the start of the Build Along by using the code word **NEWTRACKS** when ordering.

<https://www.brennansmodelrr.com/>



Crystal River Products

On March 6, 2024, Rand and Seth Johnson, Father and Son owners of Crystal River Products will begin their Build Along of one of their kits. Details about the kit including the discount available to viewers who purchase the kit, as well as the code word to use when ordering the kit will be available soon on our website. Please visit their website at: <https://www.crystalriverproducts.com/> for additional information about their company.

Ipswich Hobbies

Jack Dziadul, owner of Ipswich Hobbies, will build his Section House kit starting April 10, 2024 in a Build Along. The kit is available in N, HO, and O Scale for New Tracks Modelers.

Special Pricing for New Tracks Modeling Viewers:

1. Kit #6 N scale \$15 less 20% discount = \$12
2. Kit #5 HO scale \$25 less 20% discount = \$20
3. Kit #18 O scale \$45 less 20% discount = \$36
4. Shipping \$8.95 – Local pick-up option

Ordering the kit:

1. Discount code – **NEWTRACK** (good for one kit)
2. Discount start date March 6, 2024
3. Discount end date April 15, 2024

Please visit the Ipswich Hobbies for more information about the company and its products:

<https://ipswichhobbies.com/>



For the Next Generation of Modelers: New Tracks Modeling Mentoring Scholarships

Greg Cassidy, Ethan Bernstein, and Bob Geldmacher at the New Tracks Modeling table at the Great Scale Model Train Show in Timonium, MD October 14, 2023. Ethan was our 2023 Scholarship Winner. His Dad took the photo. Thanks Scott Gear for producing a great show.

On Sunday, Steve Sherrill took over the table, and ran one of his battery powered locomotives at our table.

Thanks guys for promoting New Tracks Modeling and our Scholarship program.



Two things the New Tracks Team and the model railroad community can do to help make our 2024-2025 Scholarship a success:

1. Donate to the New Tracks Mentoring Inc. 501(c)(3) Florida Non-Profit Corporation for our Scholarship

We are pleased to be able to grant \$6,000.00 in scholarships for the 2024 year. We are now starting to solicit donations for 2025 scholarships, and are hopeful we will exceed the 2023 donation level. As a registered 501(c)(3) non-profit corporation, your donation to the scholarship is tax deductible as allowed by law.

Individual Donors so far: Rick Barton. Greg Cassidy. George Sebastian-Coleman. Bob Davidson.



Jim Kellow, David Vaughn, Gary Kirby. LocoFi. Hank Primas. Ronald Przygodzki. Stuart Rankin. Travis Summit. Ronald Walters. Jeff Zibley, Sherri Johnson, Edward O'Rourke, Chris Coarse, Earl Hackett, John Stockton, Kenneth Amos Jr, Jack Dziadul, Phil Edholm and the Anonymous donor.

New Tracks Mentoring, Inc. grants scholarships to qualified HS graduates who will be or are pursuing a STEAM (Science, Technology, Engineering, Arts or Mathematics) program at a two-year or four-year college or university or an accredited technical school. The Officers of the Corporation are: Jim Kellow MMR President, Bob Davidson Vice President and Treasurer, Phil Edholm Secretary, and Jeffery Joyner Attorney.

As I stated at the start of this article, we are pleased that Bob Davidson and his committee have reached our initial goal to grant at least \$4,000.00 in scholarships for the 2024-2025 academic year and are actively soliciting donations to hopefully exceed that goal and prepare for the next year. As a registered 501(c)(3) non-profit corporation, your donation to the scholarship is tax deductible as allowed by law.

There are several ways that you can donate to the New Tracks Modeling Mentoring Scholarship:

The simplest way for individuals or organizations to donate is to use the Zeffy platform. We have chosen Zeffy as they insure that 100% of your contribution will go to the scholarship. There are no processing or administrative fees. To use the Zeffy platform, please click [here](#).

If you wish to make a contribution by check, make the check payable to New Tracks Mentoring, Inc., and mail it to:

New Tracks Modeling Mentoring Scholarship
c/o Bob Davidson
6273 Gulf Stream Path
Cicero, NY 13039

Make an individual Donations of \$80.00 or less to help match our Special Challenge Grant of \$1,000 from our Anonymous donor.

An Anonymous donor to the Scholarship fund has made a \$1,000.00 donation challenge to New Tracks Scholarship donors. The donor will match up to a maximum of \$1,000.00 of individual donations of \$80.00 or less made to the New Tracks Modeling Mentoring Scholarship between now and December 31, 2023. For your convenience you can use our [Zeffy account](#) to make any size donation you want. You may also pay by check as indicated above.

The New Tracks individual donor contributions will be recorded and shown each week on our Wednesday evening New Tracks Modeling Zoom show so we all can follow how close we are to achieving our Challenge Grant Goal. All of your help in achieving this goal is greatly appreciated.



Remember, every \$1.00 donated to meet this specific challenge is really a \$2.00 donation to the scholarship fund.

Corporate Donors

There are several tiers of donations available to companies who wish to support the New Tracks Modeling Mentoring Scholarship. All companies who donate at any of these levels will be eligible to have their logo and links on the scholarship page of the New Tracks Modeling website for that annual cycle (one year cycle after the award of the previous year scholarship):

Companies that donate \$250 in any annual scholarship cycle will be identified as Brass Donors; Silver Donors will be recognized for a \$500 contribution, Gold Donors for a \$750 contribution and Platinum Donors for a \$1,000 contribution. Donors who contribute at least \$2,000 will be listed as a specific scholarship sponsor.

Please contact us at: NTMMS@newtracksmodeling.com to arrange for your corporate donations. Donate early to maximize your exposure. Remember, your contribution will help the young modelers who are the future of our hobby.

I am pleased to announce and thank our first four Corporate Brass donors. They are:

1. [New Creations Victorian Railroad Buildings,LLC](#) Owned by Alan Rogers
2. [Brennan's Model Railroading](#) owned by Dennis Brennan
3. [Great Scale Model Train Show](#) (GSMETS) owned by Scott Geare
4. [The Model Railroad Resource LLC](#) owned by Dan and Amy Dawdy

I am also also pleased that the Pacific Coast Region of the NMRA is our first Donor who has contributed \$2,000 and therefore will be listed as a Specific Scholarship Sponsor for one of our 2024 scholarships. The name of this Scholarship will be:

The New Tracks Modeling Mentoring Scholarship sponsored by the Pacific Coast Region, NMRA.

Thank you for the leadership and commitment to our young future modeler's education exhibited by these companies and organizations.

2. Solicit/Mentor/Educate Applicants About Our 2024/2025 Scholarship Program

We begin accepting applications for the 2024-2025 academic year on January 1, 2024. We recommend that interested applicants download a copy of the application for review even if planning to apply on-line. If you have any questions, or need help completing your application please Email us at:

NTMMS@newtracksmodeling.com

Qualified applicants MUST meet the following criteria:

- Must currently be either a current high school senior or a high school graduate living in the United States.
- Are planning to or currently attending a two-year or four-year university, college or accredited technical school in academic year 2024-25 with an intent to pursue a degree in one of the STEAM fields.
- Have a current GPA of 3.0 or higher.
- Demonstrate participation in either a model railroading or other modeling youth activity program such as Youth in Model Railroading®, Scouts MRR program, 4H model railroading, MRR Youth clinics, active participant in building a home layout, or belong to an organized model railroad club. Participation in general modeling clubs and activities will also be considered.
- Write an essay of at least 500 words describing how their involvement in modeling and model railroading as a hobby has impacted their lives and benefited their education within one or more of the STEAM areas of academic pursuit.
- Demonstration of having designed and/or built models by submitting photos and descriptions of at least two models completed by the applicant.
- Provide two references to affirm applicant's involvement in railroad or other modeling activities. (NTMMS will be contacting any listed references, so please let them know ahead of time).

Please note: Scholarship funds will be disbursed directly to the Bursars Office of the school where the student will be attending. Any NTM staff member or relative is prohibited from applying for this scholarship.

Applications can be submitted on-line or by mail.

[Click here to download an application for review.](#)

The on-line application will be available January 1, 2024.

Please note that you MUST have a Google Account to complete this on-line form as you will need to upload files.

If you have questions or need assistance contact us here at: NTMMS@newtracksmodeling.com

Help Show our Scholarship Banner at Events

Bob Davidson generously donated three banners through his company, Exhibits And More, which will be shown at train shows and rail expos across the country. Each banner is 3' wide and about 7' tall and has a QR code on it to link you directly to our website to get more information including the application to apply.

It's a retractable unit that is very easy to ship and set-up. So if you want one for your event, let Bob Davidson know at: bobdavidson@newtracksmodeling.com.

In addition to the banners, we can also provide handouts about the Scholarship program to local events we are not able to attend in person.

Look for New Tracks Modeling at any show you attend. We hope to be represented at as many shows as possible. If you want to take one of our Banners, or help man a table, or have us be a part of your table, contact Bob Davidson at: bobdavidson@newtracksmodeling.com.

Remember, one of these years your kids or grandkids may benefit from the New Tracks Modeling Mentoring Scholarship program that you helped start. I truly hope so. Thank you.

Thank you to everyone who helped us display the banners or pass out our handouts at shows around the country last year. We are currently taking reservations for our banners for our second year's 2024-2025 Scholarship Program. To let us know if you can help show a banner, please contact: Bob Davidson at: bobdavidson@newtracksmodeling.com.

New Tracks Mentoring Inc, is the only organization, we are aware of, comprised solely of volunteers from the model railroad community who have created a nonprofit 501(c)(3) company whose sole purpose is to provide scholarships throughout the United States for the benefit of young modelers who are pursuing a STEAM education after High School graduation, in a college, university or accredited technical school.

The contributions and help by the current model railroad community can help the next generation of modelers provide the leadership and continue the traditions of our great hobby. For more scholarship information and to donate visit our website, newtracksmodeling.com/scholarship.

While I am modeling, you can help New Tracks Modeling by:

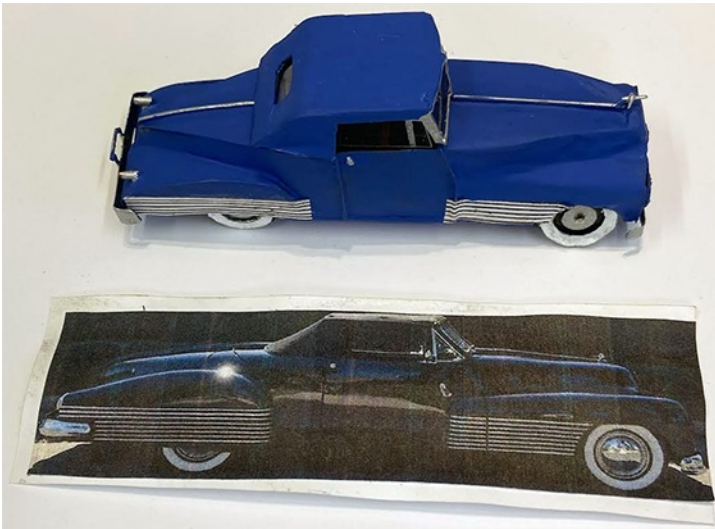
1. Volunteering to help us produce and develop our New Tracks Modeling shows.
2. Making a contribution to our Patreon account, New Tracks Modeling, to help pay for our out of pocket cost to run our shows. Click here to [donate](#).
3. Subscribing for free to our YouTube Channel, New Tracks Modeling, and ringing the bell to get advance notices of our YouTube shows including our Modeling Lifestyle series. If the advertisements on our YouTube videos are of interest, please watch them so we can gain a little revenue to produce our shows.
4. Subscribing for free to our website: NewTracksModeling.com which provides login links to our Wednesday Zoom events and also provides information about what New Tracks you can travel with us.

5. Spreading the word about our New Tracks Modeling Mentoring Scholarship program to every young model railroader you know or you meet. Get the word out. Details at our website: newtracksmodeling.com/scholarship

6. Subscribe for free to *The O Scale Resource* and *The S Scale Resource* online magazines so you don't miss any of my articles, and also see some great modeling by various modelers who may become one of your mentors.

7. Writing me! I love getting your comments, suggestions, and modeling ideas. I so enjoy hearing from you and having a conversation. My email is: jimkellow@newtracksmodeling.com.

It's that time again: I must return to my workbench and start working on something that I fell in love with and just have to model. Happens all the time.



Believe it or not, I just finished my brass scratchbuilt 1938 Buick "Y" concept car designed by GM's Harley Earl. Based on how many mistakes I made it became a major learning experience. Now onto the next learning experience.

**Love Modeling?
Want to improve your skills?**
Join. Learn. Explore. Enjoy!

NEW TRACKS
with host Jim Kellow, MMR
"Where Mentors help Modelers Build"

NEW TRACKS is an exciting, **NEW, FREE**, communication concept. Our shows are live and interactive on Youtube every Wednesday at 7PM ET.

Find a mentor - Meet and talk with talented modelers and manufacturers from around the world.
Get discounts - Buy kits used in our BUILD ALONG segments.
Explore a wide variety of modeling topics including new technologies. Scratchbuilding. Kit Building. Kit bashing.
Share your own modeling in our MY BUILD sessions.

Give us a try!
Subscribe to **NEW TRACKS** at our website: newtracksmodeling.com for details and Zoom links or subscribe on our YouTube channel: **New Tracks Modeling** for show information.

NEW TRACKS

NEW TRACKS MODELING

“MY BUILD” Models Shown on the November 22, 2023 Show

These are some of the photos modelers shared on our November 22, 2023 MY BUILD Zoom Show.

[You can see a video of the entire MY BUILD segment here.](#)

Each of the participants has an email address included, and welcomes your contact.



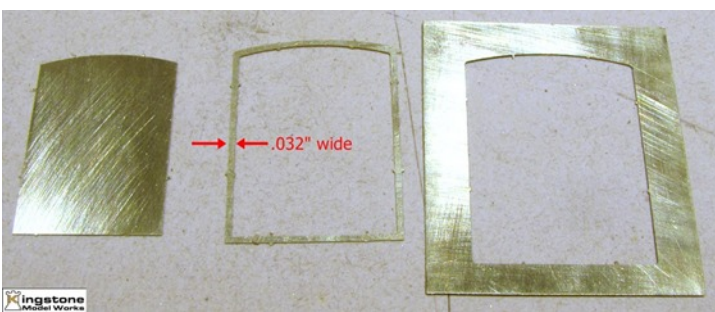
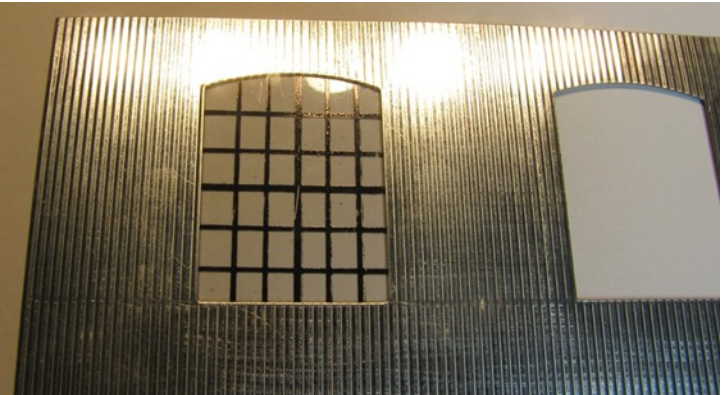
*Martin Brechbiel-
Martin.Brechbiel@newtracksmodeling.com - O Scale –
K brake truss rod underbodies. Tool car.*



Tony Dixon – tex50613@gmail.com – S Scale
 – UP 2466 SD60M rework of details. Also a
 build of UP 911000 Tank Car Trainer.



Below & Next Page Top: Bernd Fanghanel – protolancer@kingstonemodelworks.com - HO Scale – Suydam 2-
 Stall Engine House. Acetate window. Window frame cut out using a CNC machine. 38 solder joints per window.
 456 solder joints total.





Below: Jeffrey Jordan – jordan.jordan54@verizon.net - Here's my model of the Middletown Depot and a photo of the original for comparison. I will be giving a presentation in December on how I built this. Altoona Modelworks Small Town Depot in O scale.



Below: Mitch Lovelace – lovelacemitch@gmail.com – HO scale – boxcars purchased as a lot to learn how to rust. AK interactive rust systems.





Alan Rogers – eauchiche@gmail.com – Family history and parental home of his great grandmother in southern Illinois. O scale scratchbuilt house. Campbell HO Scale Timber Oil Derrick – O scale scratchbuild.



Gary Shurgold – gshurgold@gmail.com - Jordan HO – buggies.





Bill Stimson – wstimson@q.com - This N scale scratch build is from a Jack Work article from Model Railroader.

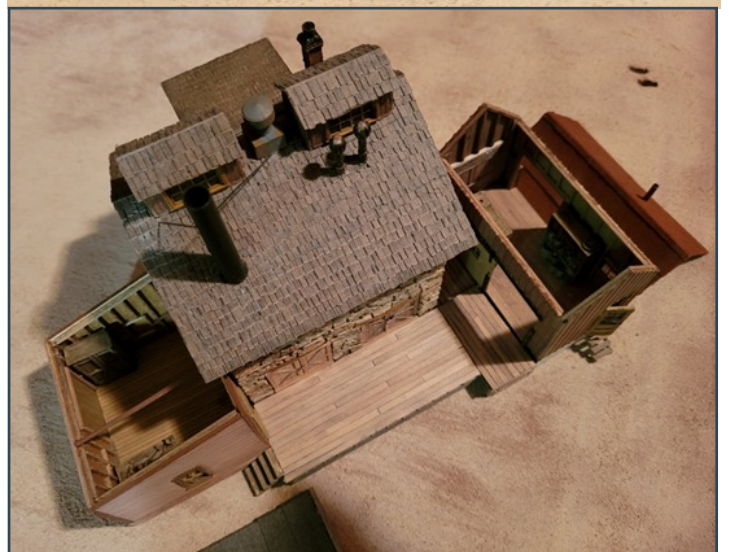


James Taverna – taverna1@cox.net - O Scale - I am preparing a tender to use for a presentation on how to apply those dry transfers for Jim, and I had to detail it before I could paint it. The model is a US Hobbies tender for a PRR 2-10-0, an II in PRR parlance. It is a class 90F82 tender. I show two tenders to illustrate how much more detail goes onto the tender as I bring it up to current standards.

This is a soldering and filling project that follows prototype practices and takes a model produced 50 years ago and really makes it look distinctive. I did not include a completely finished look as I plan to show that when I can do the dry transfer session for Jim.



Rich Wolfanger – nonameron@hotmail.com - HO scale. Scratchbuild of FSM Sewall's Foundry. Hydrocal and wood.



Model Railroad Resource 3D Division - Resin Parts



Announcing our new BUDA No. 30 Clamp Type Steel Bumping Post. These can still be found all over, on customer sidings, yards and more. Kit includes the clamping parts to attach to the rail. Only \$8.95

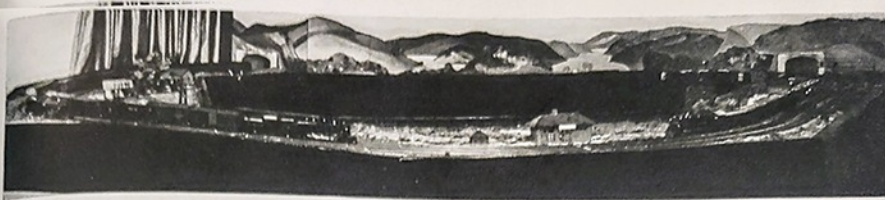
O Scale... Old School Style Vintage O Scale 1926-54

By Carey Williams

Email author by clicking on their name.



B&O / Duke Energy Holiday Layout 1935 - 2023



B & O LAYOUT THRILLS THOUSANDS

MORE than half a million people—probably a greater number than has ever seen any other single model railroad—have seen trains running on the O-gauge layout pictured on this page. Displayed in three cities, it has attracted huge crowds of model railroaders, potential and active, wherever shown.

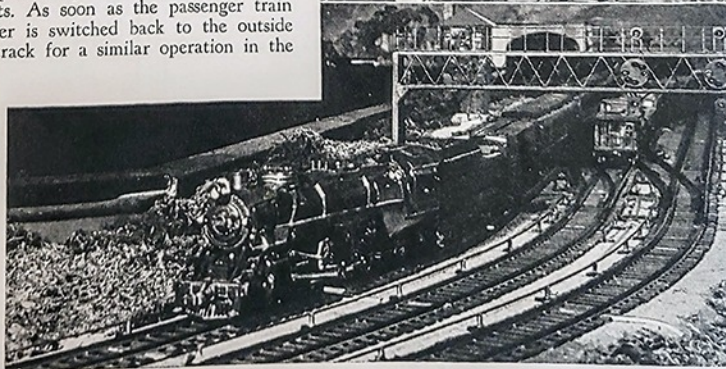
The model railroad was originally built in connection with the Baltimore and Ohio—Model Craftsman Royal Blue contest, and was completed about this time last year for the judging of the entries in that competition. After being used for this purpose, it was used as a publicity display by the B & O to arouse greater public interest in railroading.

The track is laid on a platform sixteen-and-a-half by twenty-four feet, and is arranged in the form of a three-track oval to represent conditions on the Cumberland division of the railroad. This division, called the "bottle neck" of the B & O, is the place where all the western lines converge, and traffic is very dense. By the use of frequent crossovers and proper signal control this division is arranged so that it can carry the same volume of traffic that normally would call for a four-track line.

The system, which is reproduced on the model, is relatively simple in principle. The two outside tracks are the main lines, while the center track is a sort of continuous passing siding. Thus when a passenger train overtakes a slow freight, the freight train does not "go in the hole" (enter a siding) and stop. Instead, it is switched over to the center track and the passenger train continues on its way via the outside rails. Thus, passenger operation is unhindered, and the freight train does not have to make a complete stop and start. Naturally, a great saving of time results. As soon as the passenger train clears the freight, the latter is switched back to the outside track, clearing the center track for a similar operation in the opposite direction.

The model layout is completely signalled, and has sixteen remote-control switches interlocked with the signals. The center track is signalled in both directions, and the auto-
(Continued on page 50)

Conditions on the Cumberland division of the Baltimore and Ohio are represented by this three-track layout. It is completely signalled and features train control. The middle track is used as a "passing siding"

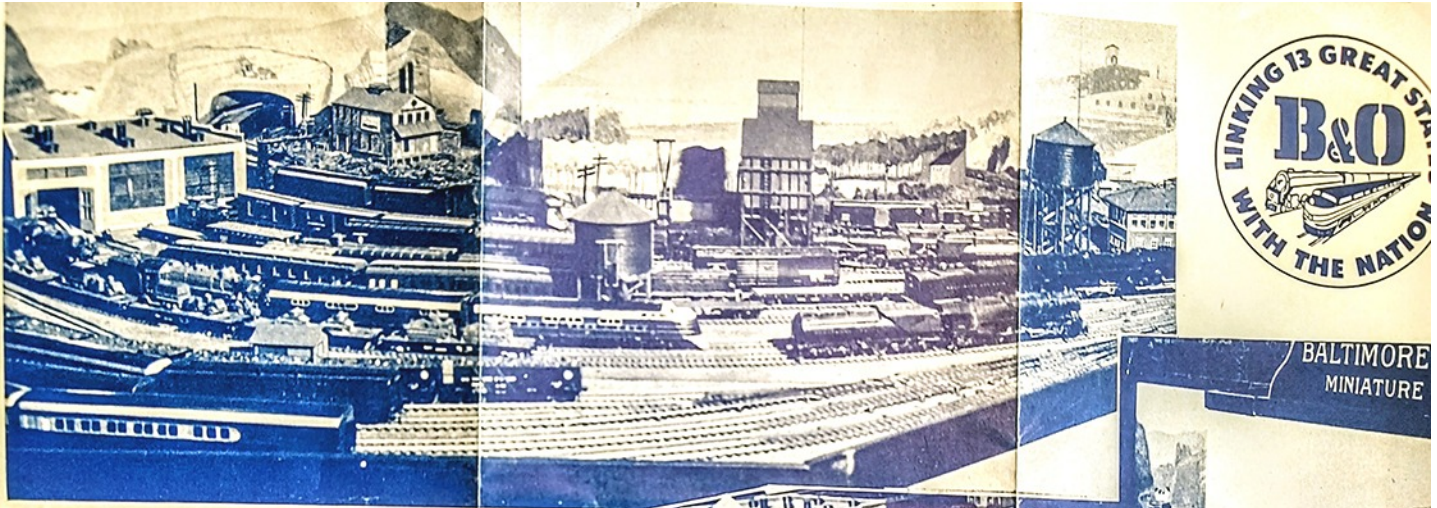


The 1933 Century of Progress World's Fair is looked at as a pivotal point in model railroading history. The Pennsylvania, Illinois Central, and Chesapeake & Ohio railroads all had large O scale layouts on display which amazed the millions of viewers and were used as goodwill trying to attract new riders during the depression.

In 1934, the Chesapeake & Ohio RR took their layout from the Century of Progress and started a tour with it along their line again attracting large crowds. The C&O layout was built by Ed Alexander and was a large modular layout that could easily be taken down and set up at other locations. The Baltimore & Ohio Railroad was quick to take note of their competitor's new sales tool and set up a layout in their Camden Street station during the 1935 Christmas season.

In 1937, the B&O Railroad sponsored a model building contest in conjunction with *Model Craftsman* magazine. The winning models would be run on the new modular layout which was set up at the Smithsonian and then later moved to the Museum of Science and Industry in New York City. The layout was such a huge success that it started to travel around along the B&O route.

April, 1938

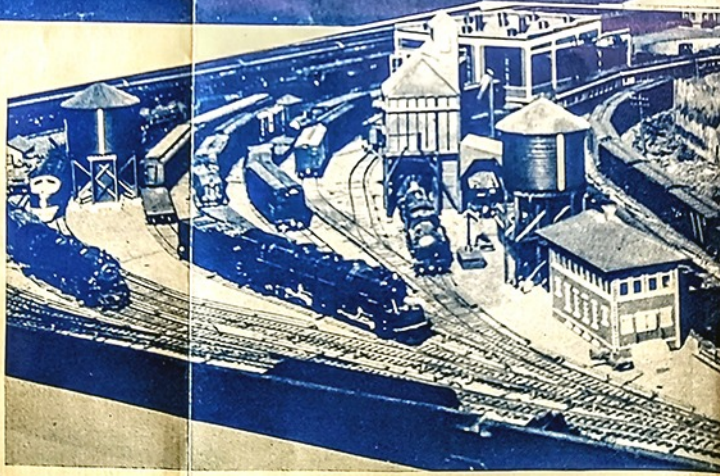


Busy yard and engine terminal. Notice locomotives on ready track

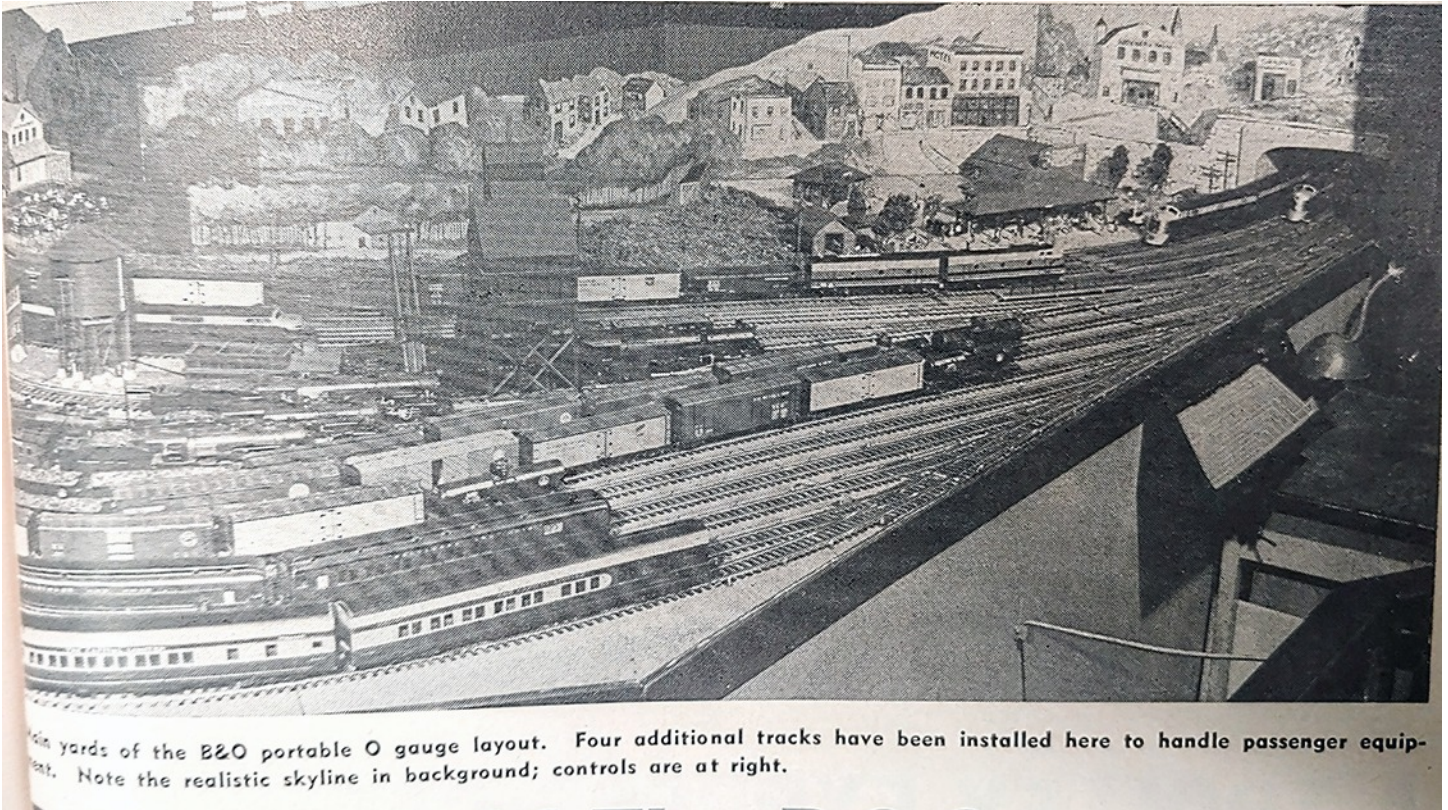
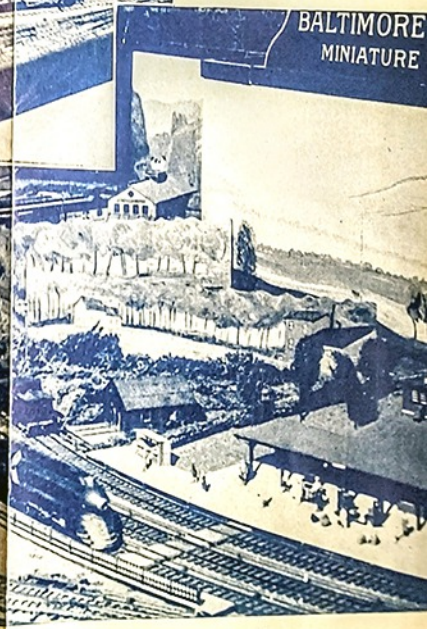
Color-Position Light Signals

The miniature signals are reproductions of the B & O standard color-position light signals. The spectator will be interested in watching the changing aspects as the trains approach and pass the signal bridges.

Two red lights in a horizontal position indicate that the track ahead is blocked. Trains stop for this signal; then proceed automatically when the clear or caution aspect appears. Two amber lights shown at an angle of forty-five degrees indicate that while the next block ahead is clear, there is a train in the second block



An interesting place is the junction of the main line (right) and the yard (left). The Royal Blue, right foreground, is passing a fast freight just west of the station. Note the big EM-1 Mallet standing clear of the switch waiting its turn



Yards of the B&O portable O gauge layout. Four additional tracks have been installed here to handle passenger equipment. Note the realistic skyline in background; controls are at right.

In 1940, the layout was again rebuilt with a three-track main, fully operational signals, and switching that could allow running of trains simultaneously using the center rail as a moving passing siding as done on the B&O Cumberland division. The overall size was 16' x 40' and utilized outside third rail. Many of the engines and rolling stock used on the layout were built by Ken Henry of Baltimore. Henry had modeled many of the B&O engines and sold components to the public or complete engines. He had a unique suspension system on one of the sets of drivers to help with traction.



The layout was also prominently displayed many buildings built by Model Structures of Santa Cruz California from the late '30s and early '40s. The layout criss-crossed the B&O route many times over the years and was used to sell war bonds during World War II. The layout was also used to recruit employees to the railroad after the war, and was shown at two NMRA Conventions.

In 1949, the layout was remodeled adding a high level route and an expansion in the yard area. The layout continued to travel the B&O route set up in hotels, department stores, and prominent lobbies. In the 1960s, Duke Energy of Cincinnati set up the layout in their lobby as an annual event beginning 50-year tradition. The



B&O donated the layout to Duke Energy, which in turn, donated it to the Cincinnati Union Terminal Museum in the early 2000s.

Please see link for video of layout: <https://youtu.be/QR2RGuRyGzk?si=CFJj6kigYCc0CbZM>



Along the Railroad

A North American Rail Journey
1958 - 1978



Howard Serig

with
Kent Loudon

Along the Railroad features the exciting and unique railroad images of photographer Howard Serig who has captured the special time "when trains were really trains!" Many have claimed it to be "The best railroad book out there!" To see a video preview of the contents of the book please click on the image above. This is a limited edition hard cover book containing 222 pages of content. Copies are available for \$49.95 plus actual shipping. Orders may be placed by contacting the seller below:

kjkriigel@aol.com (mention book title) or by phone: 434-589-2660.

Check out our Website. All back issues are available for download. Submit your events and classifieds ads online, or request advertising information.

Need information like drill sizes or prototype pipe dimensions, nut bolt dimensions or even

Westinghouse brake diagrams?

It's all here.

Check out our videos also!

Everything you need on one place!

Excelle Lubricants distributed by JT's Mega-Steam



Excelle Lubricants

- Designed specifically for model railroads
 - Oils are plastic compatible and conductive
 - Convenient 4-pack; or purchase individually
 - Different viscosities for specific applications
- Usage guide provided*
- Featuring precision needle point applicators
 - Developed, tested, and packaged in the U.S.A.

MEGA-STEAM • 11 Out of Bounds Road
Palmyra, VA 22963 • email: jkmegasteam@aol.com
For Visa / MC orders and info:

www.megasteam.com

(434) 589-2660 • 10am to 6pm EST

BACKSHOP SOLUTIONS

By Ross Dando

Have a modeling question for our experts? Please send your description of your modeling problem to backshopsolutions@oscaleresource.com.

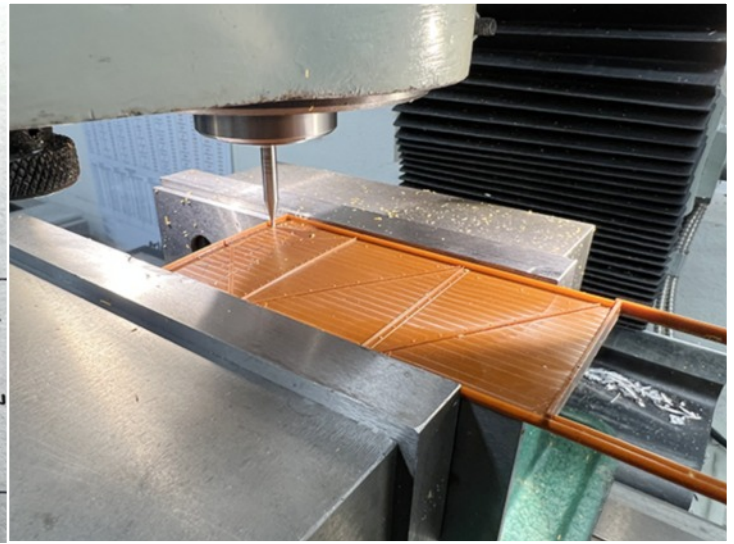
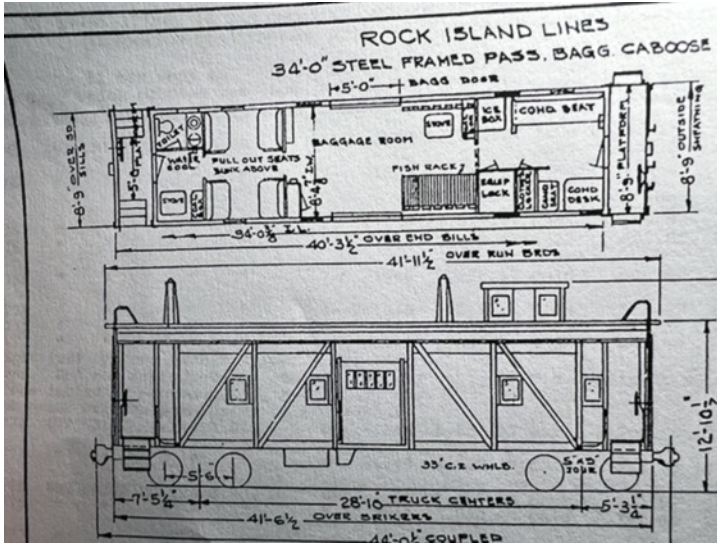
What to do at the end of the year? Build a cabooses to bring up the rear!

This past year I renewed my NMRA membership with a goal. Don't just pay the dues to go to the meets, participate in the AP program. Bill Yancey and I discussed this and you see how it turned out for him. Well deserved MMR #745. My journey will be much longer, but I have a path. This year saw the submission for "Author" along with seven of the eight required models for the "Car" category. The final car required is a passenger car. I don't model passenger trains. But I do model a branch line. The Rock Island had a mixed train service passenger, baggage cabooses. This qualifies, so it is off to the races!

Jim Zwernemann built one of these Rock Island cabooses a number of years ago and it has always been a favorite of the various models the Proto48 crowd has produced. Jim also wrote a clinic with excellent



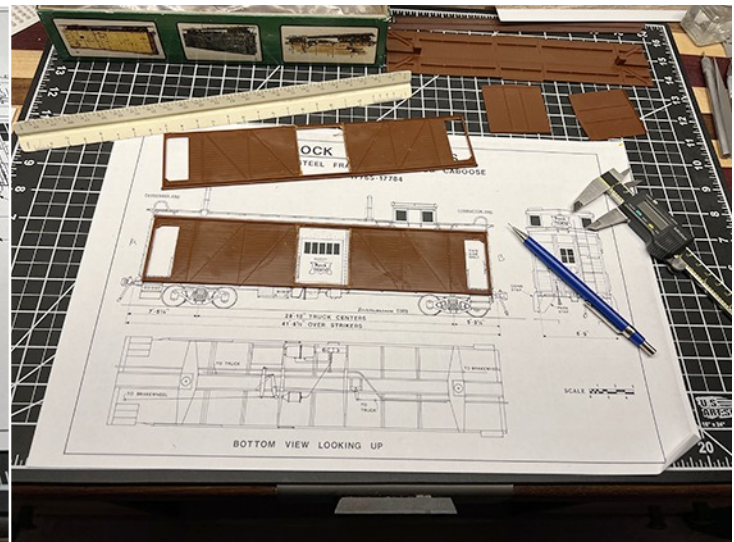
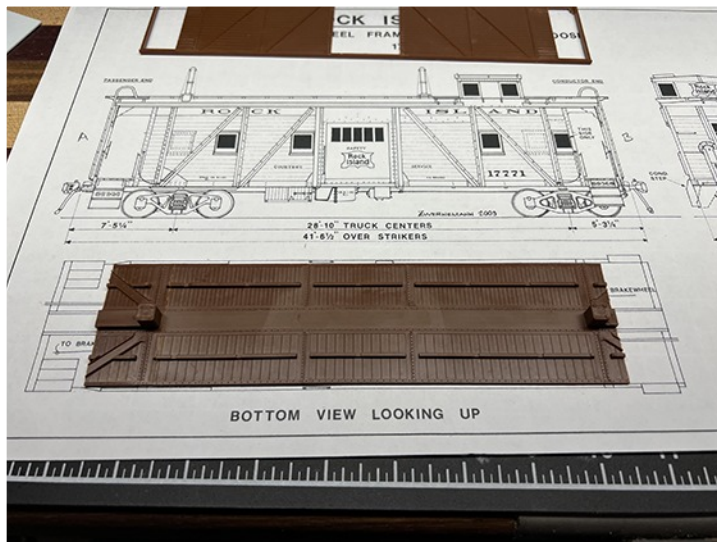
information to turn the San Juan DRG&W box car, which is a match for the Rock Island B-2 box cars these cabooses were built from.



I took the plans drawn by Jim down to the copy shop and sized them up 182% to get the correct 1/4" to the foot. With this in hand I set about figuring out what stays and what goes.

What have I accomplished on the caboose? Not much, but the journey has begun and I had the last two weeks of December to work on it daily. Shown here is what has been accomplished before going to press.

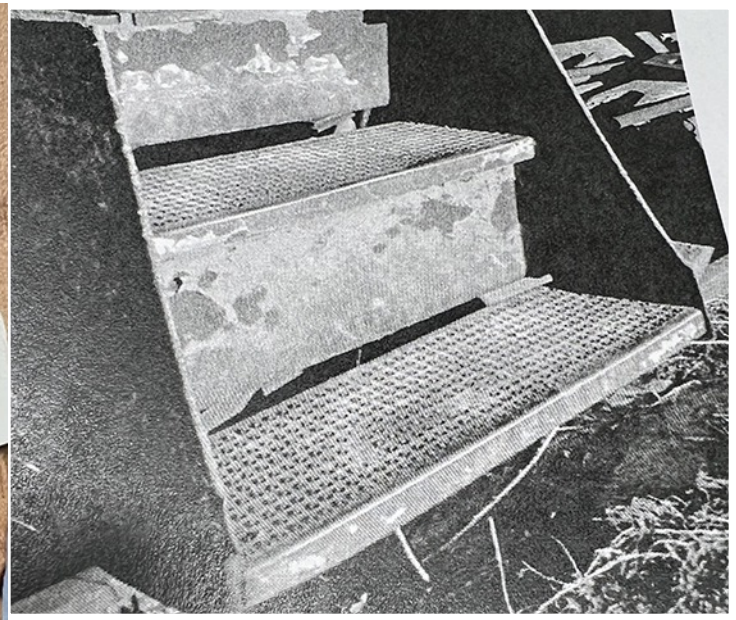
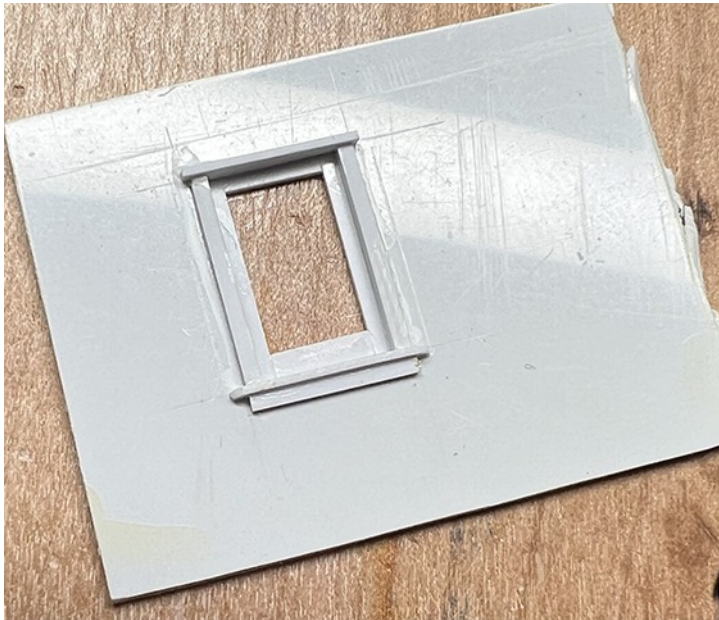
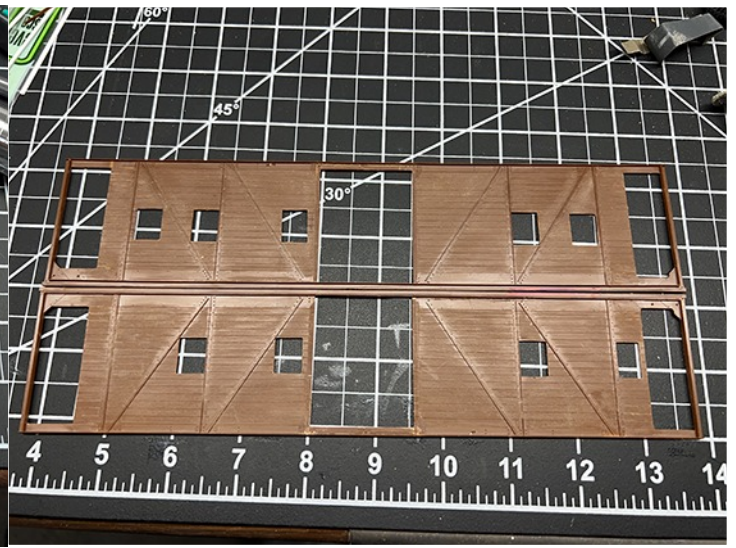
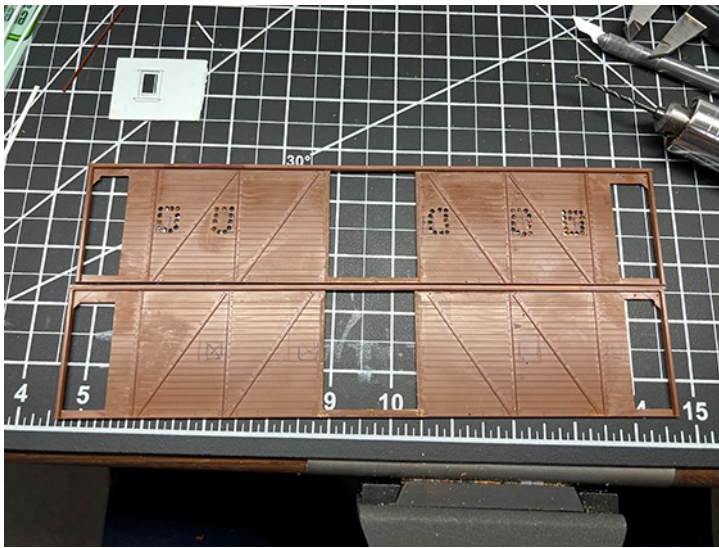
The first task was to open up the vestibules on both ends. The areas to be removed were marked on the sides and then the bulk of material was removed on my mill. A bit faster than drilling holes and connecting the dots. Once the material was removed, the fine tuning was done with #16 blade and a fine file.



The next step was the window openings. It was here I went back and forth and finally sat down with Bill and got some guidance. He has convinced me that scratch built windows aren't that hard.

I started by making a test window in a scrap to see how it would turn out. It also gave me a place to make sure I was happy with the material sizes.

Once this sample was complete, I was ready to mark the sides and get to removing material. For this task, I went the route of connecting the dots. It went quick with a flex shaft hand tool and drill. After the centers were removed, I used a course file to rough out each hole. Final shape was achieved with a #16 blade and fine file.

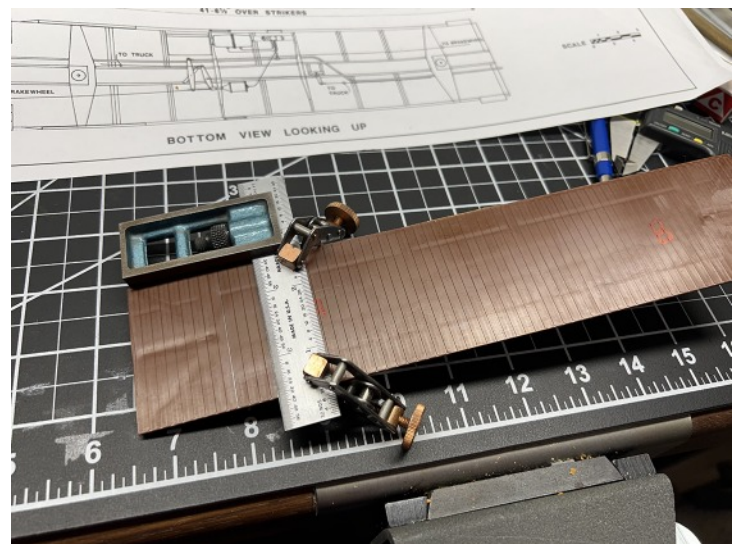


The windows won't be built until I'm sure no additional holes are needed in the sides and I have the rest of the pieces made to assemble the car body.

The last item I was figuring out, the tread material for the steps. Jim's picture of the prototype got me thinking. I happened to have some tread material from my HO days and it will make a very good stand in. Now to get the rest of the tasks done so I can get to this step...

So what is this issue's tip?

Clamps. Can never have too many. But having the right one is important. When I scribe styrene, I either perfectly scribe the line and get the part I thought I was making, or, I demonstrate why it might not be a good idea for me to have sharp objects.

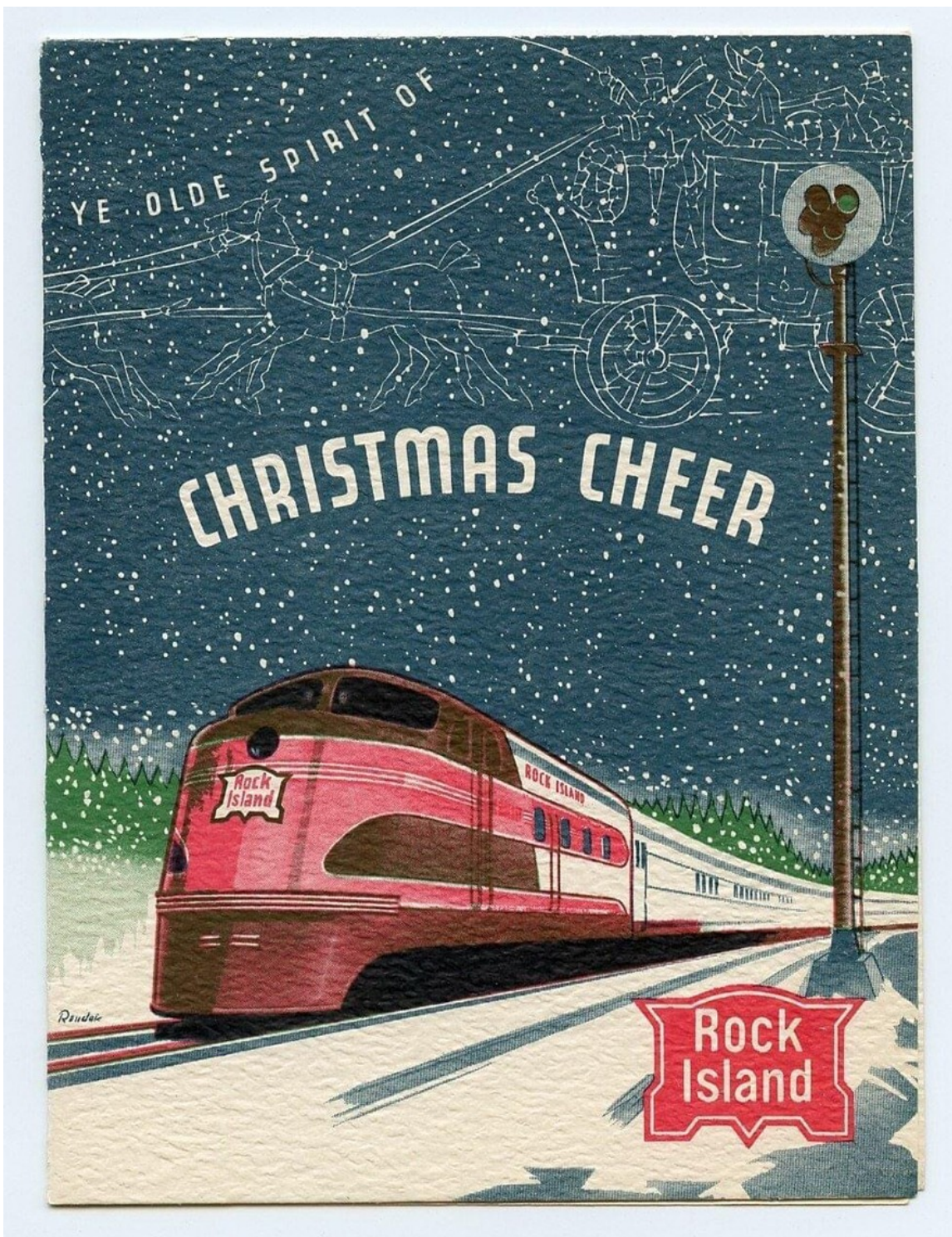


I have found that clamping the straight edge is a great way to remove one degree of difficulty. For this type of clamping, I like a clamp made by the Kant Twist company. There are knock offs of the design to be found on the Internet. The action of tightening the clamp does not add a twist to the base or material and the work put into positioning the straight edge isn't lost.

So, as we step into this new year (pun intended), make sure you spend more time at the bench and build something. Looking forward to any questions you may have about what I'm working on, or on what you are working on.

Happy New Year!

Ross



So, What Are You All Up To?

Please Email us your pictures and captions to photos@modelrailroadresource.com. And remember, a little bragging never hurt anyone!

[Michael Russell](#) says: "I just sent a handful of photos of my father's layout - The GF&O.

The layout is modeled after a hypothetical local short line, the Dansville & Mt. Morris (D&MM), which was sold and renamed Genesee Falls and Ontario (GF&O) in 1952. The new owner has kept a 4-4-0 steam locomotive from the D&MM and being a steam enthusiast, has added other steam locomotives to his inventory, along with second-hand and historic diesel locomotives.

The railroad provides freight and limited passenger service, along with occasional steam excursions between the towns of Dansville, Groveland, and Mt. Morris, NY. It once had connections with the Erie and Pennsylvania railroads. All photos by Ronald Stacy.











O SCALE SHOWS & MEETS

Have an upcoming O Scale event? We would like to help publicize it. Send us the information up to one year in advance, and we'll place it here along with a direct link to your Website and/or Email. [Click here to send us your information.](#)

O Scale South 2024 Train Show

Saturday, February 24, 2024 9am - 2pm

Cross of Life Lutheran Church, 1000 Hembree Road, Roswell, Georgia.

Admission: \$6.00 (your spouse and children free).

Tables \$30.00 each (includes admission).

On3, On30, On2, Proto:48, and 3-rail scale welcome.

Modular display and Layout tours available.

Contact [Dan Mason daniel@masonlaw.us](mailto:Dan.Mason.daniel@masonlaw.us) or 770-337-5139 to reserve tables and information.

Website: <https://oscalesouthshow.com/>

O Scale March Meet

March 14-17, 2024

Westin Lombard Yorktown Center
Lombard, IL

The March O Scale Meet is a 3 day gathering of vendors, customers, clinics, and fun held annually in March in the Chicagoland area. This is the Chicago O Scale train show you've heard of.

Website: <http://marchmeet.net/>

Email: ChicagoMeet@yahoo.com

Harrisburg All O Scale Meet

April 6th, 2024 9AM-3PM

Sponsored by: [Narrow Gauge Modeling Company](#)

New Hope Church

584 Colonial Club Drive, Harrisburg, PA 17112

[See the Facebook page for more information.](#)

Strasburg 2 Rail Train Show

April 13th, 2024 9AM - 1PM

Strasburg Train Show: Two-rail swap meet at the Strasburg Fire Co., 203 W. Franklin St, Strasburg, PA

Admission \$7, wives/children/military with ID free

Tables \$35 for first table, additional \$30 per.

Great food, modular layout, clinics. Contact Richard

Yoder EST evenings 484-256-4068 [Click here for](#)

[info.](#)

O Scale West - S West and Narrow Gauge West

May 24-26, 2024

Hyatt Regency Santa Clara (San Francisco area)

O Scale - S Scale - Narrow Gauge - West has been the premier two-rail O Scale, S Scale and Narrow Gauge (all scales) show held west of the Mississippi. Plan to join us over the Memorial Day weekend in sunny California.

Website: www.oscalewest.com

Harrisburg Narrow O Summer Meet

June 7-8, 2024

Friday June 7, 11am to 6pm

Saturday June 8, 9am to 3pm

Sponsored by: [Narrow Gauge Modeling Company](#)

New Hope Church

584 Colonial Club Drive, Harrisburg, PA 17112

[See the Facebook page for more information.](#)

Strasburg 2 Rail Train Show

August 10th, 2024 9AM - 1PM

Strasburg Train Show: Two-rail swap meet at the Strasburg Fire Co., 203 W. Franklin St, Strasburg, PA

Admission \$7, wives/children/military with ID free

Tables \$35 for first table, additional \$30 per.

Great food, modular layout, clinics. Contact Richard

Yoder EST evenings 484-256-4068 [Click here for](#)

[info.](#)

READER CLASSIFIEDS

BUY ~ SELL ~ TRADE

To submit a wanted to buy or sell non business classified ad please click the link below.
<https://ribbonrail.com/railroadresource/Classified/> 725 Characters \$10.00 less contact information.
Please read all instructions on the classified page form.

Central Locomotive Works

Coming soon in 2024, SD40-2 all variations including SD40-2W, SD40-2F and SD38-2.
SD45-2 and AD45-2B. SD40, SD38's and SD39's.

All available with new, "coaster" drive gearboxes also available soon.

Priced at \$2450.00

Contact Lou at 760 221-5558 or email clwusa@verizon.net



HERE IS HOW TO CONTACT US:

Phone: 815-584-1577

FAX: 800-783-0127

**Email: amy@oscaleresource.com
daniel@oscaleresource.com**

**Mail: The Model Railroad Resource LLC
407 East Chippewa St.
Dwight, IL 60420**

www.oscaleresource.com www.sscaleresource.com

MANUFACTURERS

"the people people"
Fun & Games
unparalleled craftsmanship

Phone: 573-619-8532
Email: orders@scalefigures.com
Web: scalefigures.com

FREE-SIZE
MODEL SPECIALTIES


Free Shipping
See our web site for details

Cast resin items for your S & Sn layout.
Tunnel portals, bridge piers, abutments, culverts, and retaining walls.
Trackside details and sage brush tree armatures.

SHOWS & MEETS

March O Scale Meet
March 14-17, 2024
<https://marchmeet.net/WP/>
Ph. 414-322-8043

DEALERS

Caboose Stop

Hobbies

[Caboose Stop Hobbies](http://www.caboosestophobbies.com)
301 Main St.
Cedar Falls, IA 50613
Phone: 319-277-1754
trainguy34@gmail.com
Web: www.caboosestophobbies.com

RIO GRANDE SOUTHERN RAILROAD HOBBIES

RGSRR Hobbies
2224 H Road
Grand Junction CO 81505
PH 970-245-5100

www.rgsrrhobbies.com

PROTO 48

PROTOCOLRAFT
Model Railroad Engineering in USA - Scale AAR Protocraft Standards

18498 Half Moon Street, Unit 203
Sonoma, CA 95476-4835
Phone: 707-935-7011
Email: norm@protocraft.com
Web: www.protocraft48.com

Advertisers Index

All Aboard Trains	Pg. 9
All Nation Lines	Pg. 2
Allegheny Scale Models	Pg. 53
Along the Railroad by Howard Serig	Pg. 118
American Scale Models	Pg. 54
B.T.S.	Pg. 73
Berkshire Car Shop	Pg. 9
Berkshire Valley Models	Pg. 52
Clover House	Pg. 10
Delta Models	Pg. 9
Des Plaines Hobbies	Pg. 9
Excelle Lubricants	Pg. 118
Get Real Productions	Pg. 8
Millhouse River	Pg. 52
March Meet	Pg. 4
Model Railroad Resource 3D	Pg. 53
Model Railroad Resource 3D	Pg. 112

New Tracks	Pg. 105
O Scale South 2024	Pg. 10
O Scale Turnouts	Pg. 10
Protocraft	Pg. 9
RailFonts.com	Pg. 10
RailFonts.com	Pg. 53
Right-O-Way	Pg. 53
SoundTraxx	Pg. 10
Stevenson Preservation Lines	Pg. 9
Streamlined Backshop	Pg. 73
The Public Delivery Track	Pg. 53
The S Scale Resource Magazine	Pg. 8
Trainz	Pg. 54
Tru-Color Paint	Pg. 54
Wasatch Model Company	Pg. 53
Wit-and-Wisdom Models	Pg. 10