

# THE **S** RESOURCE

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## SCALE

NEWS, REVIEWS, INFORMATION TO USE

October/November 2016

Volume 2 No.1



***Adventures In S Scale***  
***What's on your Workbench?***  
***2016 NASC National Convention***  
***Developing an Industrial Scene***  
***Let's Build A Fuel Storage Tank***  
***Shows, Meets and So Much More***

## Tichy Train Group is now producing decals in S Scale We have them in stock!

<b>TTG10001S</b>	EJ&E	53' GSC Flatcar	<b>TTG10043S</b>	Sunray	10000 gal LPG Tank Car	<b>TTG10085S</b>	GN	40' Steel Boxcar
<b>TTG10002S</b>	PRR	H-30 Hopper Red Car	<b>TTG10044S</b>	Warren	8000 gal Gasoline Tank Car	<b>TTG10086S</b>	GN	40' Double Door Steel Box
<b>TTG10003S</b>	PRR	H-30 Hopper Gray Car Roman	<b>TTG10045S</b>	Anchor	10000 gal LPG Tank Car	<b>TTG10087S</b>	GN	40' Double Door Steel Box
<b>TTG10004S</b>	PRR	H-30 Hopper Gray Car Gothic	<b>TTG10046S</b>	Associated	8000 gal Tank Car	<b>TTG10088S</b>	GN	40' Double Door Steel Box
<b>TTG10005S</b>	PRR	H-30 Hopper Gray Car Initial Only	<b>TTG10047S</b>	Gas Oil Products	8000 gal Tank Car	<b>TTG10089S</b>	GN	40' Double Sheath Box
<b>TTG10006S</b>	PRR	X-26C Boxcar	<b>TTG10048S</b>	National Oil	8000 gal Tank Car	<b>TTG10090S</b>	GN	40' Stock Car
<b>TTG10007S</b>	GN	43' Flatcar 69500 Series	<b>TTG10049S</b>	PA Salt	8000 gal Caustic Tank Car	<b>TTG10091S</b>	GN	40' Modern Wood Stock Car
<b>TTG10008S</b>	GN	50' Flatcar 67000 Series	<b>TTG10050S</b>	Dow Chemical	10000 gal Tank Car	<b>TTG10092S</b>	GN	40' Steel Automobile Car
<b>TTG10009S</b>	GN	53' Flatcar 65000 Series	<b>TTG10051S</b>	Columbian Gasoline	8000 gal Tank Car	<b>TTG10093S</b>	C&EI	40' Single Sheath Boxcar
<b>TTG10010S</b>	GN	52' Flatcar 66000 Series	<b>TTG10052S</b>	SP	Tank Car Black Lettering	<b>TTG10094S</b>	CB&Q	40' DD Steel Boxcar
<b>TTG10011S</b>	PRR	X-29 Boxcar	<b>TTG10053S</b>	SP	Tank Car White Lettering	<b>TTG10095S</b>	CGW	40' Steel Boxcar
<b>TTG10012S</b>	PRR	X-31F Boxcar	<b>TTG10054S</b>	DL&W	40' Steel Boxcar No Logo	<b>TTG10096S</b>	CGW	50' Steel Gondola
<b>TTG10013S</b>	Western Asphalt	1000 gal Tank Car	<b>TTG10055S</b>	DL&W	40' Steel Boxcar	<b>TTG10097S</b>	CGW	3 Bay Steel Hopper
<b>TTG10014S</b>	Barrett	Tank Car	<b>TTG10056S</b>	DL&W	40' Steel Boxcar	<b>TTG10098S</b>	CGW	40' Steel Boxcar
<b>TTG10015S</b>	PRR	H-33 Covered Hopper	<b>TTG10057S</b>	DL&W	40' Steel Boxcar	<b>TTG10099S</b>	CGW	40' Steel Boxcar
<b>TTG10016S</b>	PRR	H-34C Covered Hopper	<b>TTG10058S</b>	DL&W	40' Steel Boxcar No Logo	<b>TTG10100S</b>	CGW	40' Steel Boxcar
<b>TTG10017S</b>	PRR	H-31B Hopper	<b>TTG10059S</b>	DL&W	40' Steel Boxcar	<b>TTG10101S</b>	Penn Salt	Chlorine Car
<b>TTG10018S</b>	DSDX	MILW Rib Side Reefer	<b>TTG10060S</b>	West India Fruit & Steamship	Box Cat	<b>TTG10102S</b>	Virginia Smelting	Sulphur Dioxide
<b>TTG10019S</b>	URTX	MILW Rib Side Reefer	<b>TTG10061S</b>	Georgia	40' Steel Boxcar	<b>TTG10103S</b>	Clinchfield	USRA Hopper
<b>TTG10020S</b>	CDLX	10000 gal Gal Tank	<b>TTG10062S</b>	Western Ry of Alabama		<b>TTG10104S</b>	CS&PM&O	40' Steel Box Car
<b>TTG10021S</b>	MILW	Rib Side Hiawatha Boxcar	<b>TTG10063S</b>	Atlanta & West Point	RR	<b>TTG10105S</b>	C.N.&L.	40' Steel Box Car
<b>TTG10022S</b>	PRR	H-32 Covered Hopper Red Car	<b>TTG10064S</b>	Western Ry of Alabama		<b>TTG10106S</b>	CNJ	40' 1-1/2 Door Steel Box Car
<b>TTG10023S</b>	PRR	H-32 Covered Hopper Gray Car	<b>TTG10065S</b>	Atlanta & West Point	RR	<b>TTG10107S</b>	CNJ	40' Steel Box Car
<b>TTG10024S</b>	PRR	H-32 Covered Hopper	<b>TTG10066S</b>	Armour	40' Steel Refrigerator	<b>TTG10108S</b>	CNJ	40' Steel Box Car
<b>TTG10025S</b>	PRR	GLD USRA Hopper	<b>TTG10067S</b>	Armour	40' Wood Stock Car	<b>TTG10109S</b>	CNJ	53' Steel Mill Gondola
<b>TTG10026S</b>	B&O	N17 USRA Hopper	<b>TTG10068S</b>	Santa Fe	GA-67 Covered Hopper	<b>TTG10116S</b>	C&NW	40' Dbl Door Steel Box Car
<b>TTG10027S</b>	Wabash	USRA Hopper	<b>TTG10069S</b>	B&O	N-34 Covered Hopper	<b>TTG10117S</b>	C&NW	40' Dbl Door Steel Box Car
<b>TTG10028S</b>	SCL	Stump Car	<b>TTG10070S</b>	B&O	N-38 Covered Hopper	<b>TTG10118S</b>	FDD&S	40' Steel Box Car
<b>TTG10029S</b>	MP	USRA Hopper	<b>TTG10071S</b>	B&O	M-15 REA Express Car	<b>TTG10119S</b>	CS&PM&O	40' Single Sheath Box Car
<b>TTG10030S</b>	SL-SF	USRA Hopper	<b>TTG10072S</b>	ATSF	50' Steel Express Boxcar	<b>TTG10120S</b>	C&NW	40' Single Sheath Box Car
<b>TTG10031S</b>	L&N	USRA Hopper	<b>TTG10074S</b>	B&O	Sentinal Class M55C Box Car	<b>TTG10121S</b>	C&NW	40' Stock Car
<b>TTG10032S</b>	NYC	USRA Hopper	<b>TTG10073S</b>	ATSF	50' Steel Express Boxcar	<b>TTG10122S</b>	C&NW	40' Steel
<b>TTG10033S</b>	Erie	USRA Hopper	<b>TTG10075S</b>	LIRR	USRA Hopper	<b>TTG10123S</b>	C&NW	40' Single Sheath Steel Rebuild Box
<b>TTG10034S</b>	Virginian	USRA Hopper	<b>TTG10076S</b>	B&O	M-26c40' Steel Boxcar	<b>TTG10124S</b>	Continental Carbon	Black Hopper
<b>TTG10035S</b>	P&LE	USRA Rebuilt Boxcar	<b>TTG10077S</b>	B&O	M-53 40' Steel Boxcar	<b>TTG10125S</b>	D&RGW	40' Single Sheath Box Car
<b>TTG10036S</b>	PMK&Y	USRA 46' Gondola	<b>TTG10078S</b>	BAR	RS 40' Steel Reefer	<b>TTG10126S</b>	D&RGW	40' Single Sheath Box Car
<b>TTG10037S</b>	NYC	USRA 46' Gondola	<b>TTG10079S</b>	BAR	Modern 40' Steel Reefer	<b>TTG10127S</b>	US Navy	Helium Car
<b>TTG10038S</b>	NYC	USRA 42' Drop Bottom Gondola	<b>TTG10080S</b>	Anchor	10000 gal LPG Tank Car	<b>TTG10128S</b>	Dept Of Interior	Helium Car
<b>TTG10039S</b>	CDLX	8000 gal asphalt tank car	<b>TTG10081S</b>	GN	40' Steel Boxcar	<b>TTG10129S</b>	Dept Of Energy	Helium Car
<b>TTG10040S</b>	TA&G	50' Double Door Boxcar	<b>TTG10082S</b>	GN	40' Double Sheath Boxcar	<b>TTG10130S</b>	Union Pacific	40' Steel Boxcar
<b>TTG10041S</b>	TA&G	40' Single Door Boxcar	<b>TTG10083S</b>	GN	40' Double Sheath Boxcar	<b>TTG10131S</b>	Union Pacific	40' Steel Boxcar
<b>TTG10042S</b>	Heyden Chemical	8000 gal Tank Car	<b>TTG10084S</b>	GN	40' Steel Boxcar			

All decals are \$5.00 per set. To order on line go to our web site and use the part numbers listed above in bold print. You can purchase them online day or night. We will process your order first thing in the morning.

Des Plaines Hobbies 1524 Lee St. Des Plaines, Illinois 60018

[www.desplaineshobbies.com](http://www.desplaineshobbies.com)

Phone 847-297-2118

# Bill Of Lading

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## Published Bi Monthly

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## October / November

### Volume 3 No. 1

Welcome to the online *S 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

Andrew Malette's Great White North Brewery module on the S Scale Workshop layout.

#### Rear Cover Photo

Another shot of the S Scale Workshop layout in Novi, MI.

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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.

# From the Publisher's Desk



The convention season is upon us once again. Dan and Glenn just returned from the NASG National that was held in Novi, Michigan. Be sure to take a look at the highlights in this issue. One thing that Dan found refreshing was the hotel staff's customer service and attention to detail. They had welcome signs for the attendees and were very attentive to their needs.

The next convention on the agenda is the Railroad Prototype Modelers Convention October 20-22, 2016. Talk about attention to detail! These modelers definitely know that details make the model. Glenn will be in attendance at this show, as it falls between 2 O Scale conventions that Dan & I will be attending.

Attention to detail is extremely important in any hobby, but in model railroading, it sets the scene. Be sure to check out Glenn's article this month on Developing an Industrial Scene, along with the article submitted to us by fellow model railroader, Jay Mellon, on building a prototypical fuel tank.

We are always looking for articles, so let us know if you've got an idea for one rolling around in your head. Even if you're not a writer, we can help you compose the article if you provide the pictures and facts. We will work with you to get the word out about what's being done in the hobby. Once again, this comes down to attention to detail, and we can work with you to put those details into an article that others in the hobby can benefit from. Remember, because we are online, we don't limit page count or shrink pictures. The more detail, the better!

This issue celebrates the 3<sup>rd</sup> anniversary of *The S Scale Resource*. Thanks for all your readership support and continuing to spread the word about the magazine. Most people learn by example, so if you can't attend the show, please send us an article or your comments and pictures of current projects to:

[amy@modelrailroadresource](mailto:amy@modelrailroadresource) or [daniel@modelrailroadresource](mailto:daniel@modelrailroadresource)

I hope you enjoy this issue, and will consider contacting us with an article or project for publication in an upcoming issue.

Happy Reading & Happy Modeling,

*Amy Dawdy*

# NEWS YOU CAN USE

Dan Vandermause wrote to say: "I had been looking for a suitable Chicago and North Western depot in S scale for my layout. Ideally, I was looking to model the CNW depot in Belgium, WI, which was a CNW Standard #2 depot. By pure luck, I began communicating with [Scott Peterson of HRM Laser Models](#) in Wisconsin. Scott decided that it would be fun to create a depot kit in S scale, and the attached photo shows the result of his efforts."



Scott Peterson is offering this kit at \$79.99 plus \$6.00 for shipping.

Pre-Size Model Specialties has a new S-scale product, a blasted-rock tunnel portal. Like all our products, this portal is cast of tough urethane resin. The overall dimensions are 7-3/4" wide x 6-1/2" tall. The opening is 3-1/2" wide x 4-1/2" tall. The price is \$29.70 with free shipping to the lower 48. See all our S-Scale products at [www.presizemodels.com](http://www.presizemodels.com)

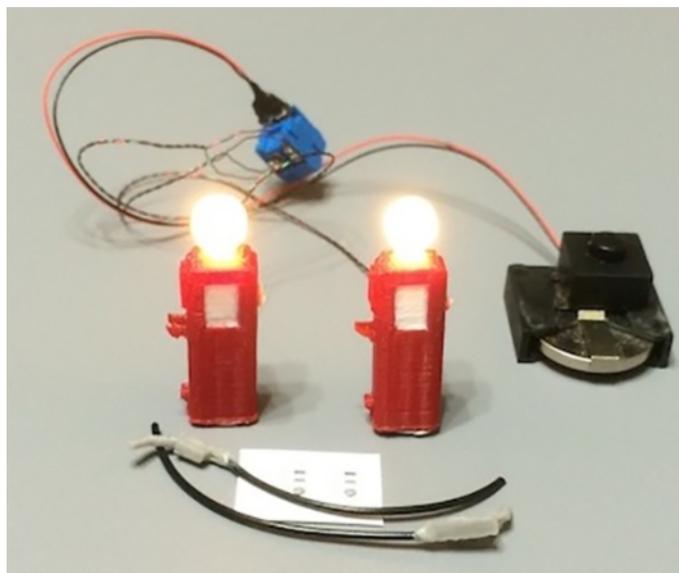


From Twin Whistle Sign & Kit Company, **Welcome to the 1887 Chicago Engine House in S scale** This firehouse comes built, as a kit, or just as a facade. S Scale for the Code 3 collectors and other hobbyists and model railroaders. The detail on this model is remarkable. Moderate building skills are required. See our firehouse either on our [website](#) or [Facebook](#) page.



Al Castellani from [East West Rail Service](#) writes: We have a new kit scheduled for the first Qtr of 2017. It is an SP stock car, S-40-5, that should be priced in line with our previous stock cars. Following the SP S-40-5 will be an SP S-40-8 which has some cosmetic changes over the S-40-5. It too, will be priced in line

with our previous stock cars. Since we do not have the end sills yet, I have attached some images of the side, bottom and top view. More are available at our [website under the "Coming Soon" tab](#).



[CatzPaw Innovations, LLC](#) added light to the domes of their 1940's-50's Gas Pumps. They glow a nice warm white when power is applied. See this and other S Scale items on their Website.



Daniel Navarre from [River Raisin Models](#) has announced Boo Rim and RRM just agreed to build the Early Berkshire Project. It will be a limited quantity project with the following versions: B&A with short tender, B&A with short tender and green boiler, B&A with NYC Tender, Boston & Maine with 4 axle and 6 axle tender, AT&SF with 6 axle tender, SP with coal tender, SP with oil tender, and IC version. Still working on the Early Berkshires. Currently putting together the data for the IC models. They are going to be a model of the 8000 series berks rebuilt at the Paducah Shops. We are still accepting reservations



AT&SF #4198, Fort Madison, Iowa, Oct. 1948



Illinois Central Berkshire #8027



until we set the final build quantity.

[Rusty Stumps Scale Models](#) announced a new S scale station. The Passenger Station is based on a late 1800's C&O standard station design taken from actual C&O plans.



- FEATURES:
- 1/32" plywood subwalls for a strong building with no need for bracing.
- 1/64" laser engraved exterior wall panels that self adhere to the sub-walls.
- Scribed sub-roof for easy alignment of shingles.
- Stripwood provided for trim.
- Interior walls that divide the passenger waiting area, office and freight area from each other.
- A highly detailed resin cast chimney made for fine 3D masters.
- Nicely detailed laser cut windows and doors.
- 50 page well illustrated and detailed construction manual to help make assembly easy, Many photos (56) and "how to" notes are included. See [www.rustystumps.com](http://www.rustystumps.com) for more details.

**Announcing the Early Berkshires In S Scale Brass  
AT&SF, B&A, B&M, IC and SP  
COMING SOON**



*Photo Courtesy of the Bob Hundman Collection*

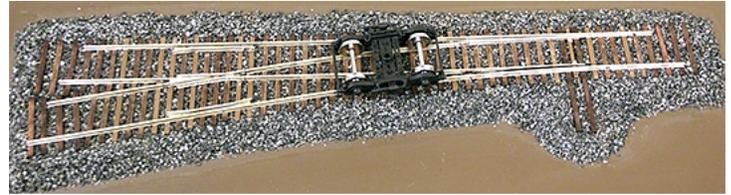
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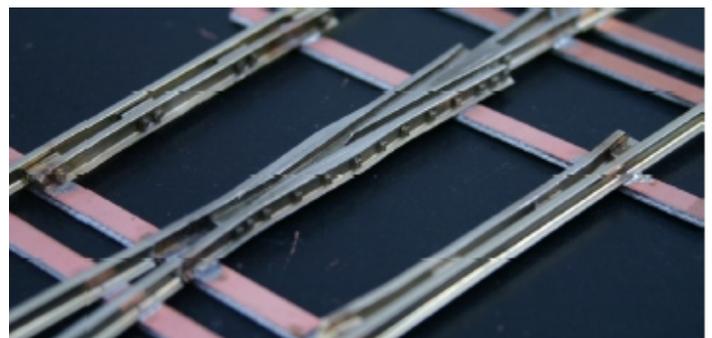
Bill from [O Scale Turnouts](#) was showing some new switches for S Scale!



Features:

- Designed to the NMRA, American Railway Engineering Association and 1921 Maintenance of Way Standards.
- Constructed using our own designed, precision milled fabrication jigs.
- American Switch & Signal modified P48 cast frog, guard rails and points, complete with nut and bolt detail, are used for a prototypical appearance.
- Code 100 nickel silver rail.
- 11-PC ties resistance soldered to the rail to insure precise track gauge.
- Solid (non-hinged) Points.
- Staggered rail ends.
- DC / DCC compatible.
- Insulated Frog.
- Point rails electrically connected to the stock rails.
- Prototypical tie spacing.
- Turnouts are designed for use with scale wheels only.
- Proudly manufactured in the United States by American Citizens.

Watch for full information on [oscaleturnouts.com](http://oscaleturnouts.com)





S Scale Track imported by [Fox Valley Models](#) is pleased to offer all new tooling on Flex track and #5 Turnouts. The Code 138 rail will match up with other brands of track and features prototypical tie spacing. Turnouts will be available in either Hi-Rail or Scale versions. This is done by changing the frog and guard rails so you have the best looking track in either version. Turnouts have an isolated frog that can be powered and the points have a centering spring so they can be used right out of the box. The throwbar is also adaptable to various hand or mechanical throws. Watch for pricing and availability this winter.

Accessories

- SST 23001 Metal Rail Joiners (Pkg 24)
- SST 23002 Plastic Rail Joiners (Pkg 12)
- SST 23003 Terminal Joiners (2 Pair)

Flex Track

- SST 23101 35.4" Long Flex Track (Pkg 6)
- SST 23102 35.4" Long Flex Track (Pkg 12)

Turnouts

- SST 23301 #5 RH Turnout - Scale
- SST 23302 #5 LH Turnout - Scale

- SST 23303  #5 RH Turnout - Hi Rail
- SST 23304 #5 LH Turnout - Hi Rail



Jim King from [Smoky Mountain Model Works, Inc](#) says: The recent announcement about SAL flat and bulkhead flats included a premature mention about the 3rd of the SAL trilogy: square bulkhead flat. Although, as stated, I have been designing patterns, most of the past 3 days was spent evaluating proto drawings and photos to determine what's required to convert the 50-0 flat to the 53-6 bulkhead flat, just as the SAL did in 1956.

This kit will be made available next month. In fact, given the very paltry customer interest and the amount of time that's passed since the original announcement, it appears this kit cannot be cost-justified based on having to design and purchase patterns for both bulkheads and a new laser cut deck. I'd hoped to use more of the previous kit patterns but such is not the case. The other 2 SAL flat/bulkhead flat kits will remain in production. I will resume the PS-1 and MILW ribside boxcars project intermixed with completing the various truck sideframe kits associated with Stanton trucks.



The second release by the folks at "Railroad Line Models" features a "road-to-rail" transfer platform. This laser-cut kit features simple construction as well as budget pricing, with a special focus on beginning & intermediate modelers as well as modelers concerned about transporting more expensive high end structures on modular club-type layouts. Locking walls, and self-adhesive "corner posts" help to make this offering suitable for modelers of any skill level, and all scales... N-HO-S-O will be available through your local retailer.... or visit [www.railroadlinemodels.com](http://www.railroadlinemodels.com) for more information.

# 2016 NASG National Convention Novi, Michigan



By Daniel Dawdy



*Hotel welcome sign.*

This year's NASG Convention, sponsored by the [Southeastern Michigan S Gaugers](#), was held August 10 through August 14 at the Sheraton Detroit Novi Hotel in Novi, Michigan. This was my first S Scale convention, and I really enjoyed the show. It's always a great social time to meet up with old friends and make new ones. To me, that's as important as the selling and buying.

I was really impressed with the Sheraton Detroit Novi which is where I stayed. Friendly staff, great rooms and the feeling that they really cared about the convention and the attendees. I only say this because I have been to many conventions where this is not the case. Amy could not make this trip so I was alone in at the table, but there were a few night time clinics that I was able to get to. Jim Kindraka expanded on an article that appeared in the [February/March 2016 issue of The S Scale Resource](#), adding heap shields to your hopper fleet. I also sat in on Bill Monaghan's clinic on 3D printing.

So grab some refreshments and sit back by the glow of the monitor while we relive this year's convention.



*Yes, we were there!*



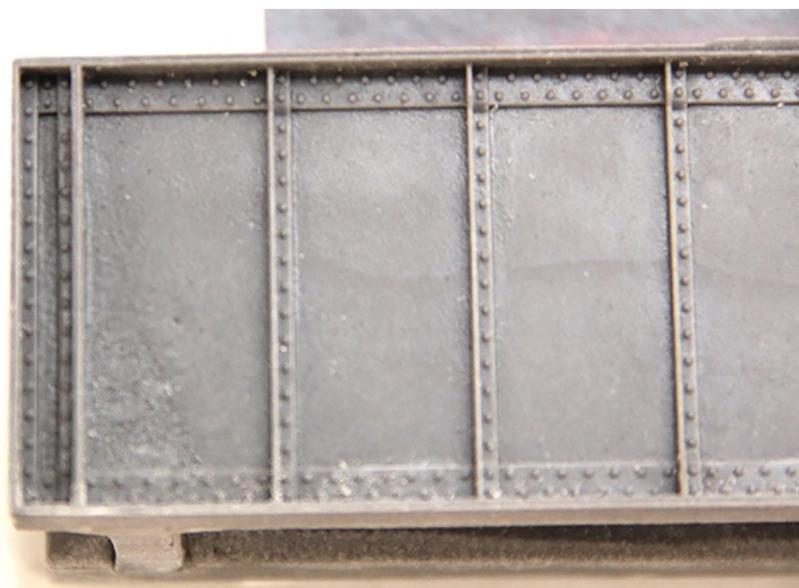
*Early Friday morning.*



*The NASG table was right next to ours.*



*Roy Meissner was there with his beautiful truck castings, and was also showing his new bridge casting. See more of Roy's trucks in the [April/May 2016 S Scale Resource](#).*





*The Structure Make and Take clinic presented by Ken Zieska was well attended. Attendees were able to purchase a convention special kit and go through the assembly and weathering.*



*ABOVE: There was no shortage of items for sale and on sale at discounted prices.*

*NEXT PAGE: Ron Sebastian from [Des Plains Hobbies](#) was making deals.*

*[River Raison Models](#) was showing their beautiful brass locomotives.*

*Sam McCoy doing some "figuring" for a customer.*

*New passenger domes from [American Models](#).*







We thought we would feature a few of the layouts in the layout room.

[The Pittsburgh S-Gaugers](#) (PSG) club is located in the Pittsburgh, Pennsylvania area for model railroaders who are interested in S-Gauge trains.





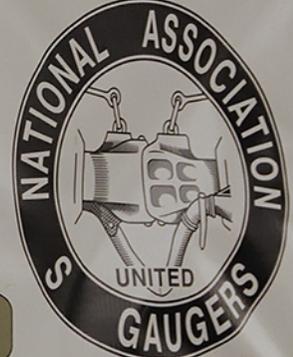
*Scenes from the West Michigan S Gaugers club. West Michigan S Gaugers is a club of interested model railroad enthusiasts from many geographies in West Michigan. New members are always welcome. Contact [Don Keil](#)*



**S-Scale - "The Ideal Size"**  
 S, 1:64 Model Railroading  
 as

- American Flyer •
- Hi-Rail •
- Scale Narrow Gauge •
- Scale Standard Gauge •

 **THE SCALE WORKSHOP**  
[sscaleworkshop.blogspot.com](http://sscaleworkshop.blogspot.com)

 **NATIONAL ASSOCIATION S SCALE UNITED GAUGERS**  
[www.nasg.org](http://www.nasg.org)

*The S Scale Workshop is comprised of a small group of like-minded modelers from Ontario, Quebec and Pennsylvania. They exhibit at a limited number of annual events, primarily in the Southern Ontario region.*

*BELOW: Culverhouse Cannery by Jim Martin.*





*More beautiful scenes along the The S Scale Workshop's layout.*





*Canadian Wetlands Scene by Andy Malette.*



*No shortage of motive power here.*



*Jim Kindraka, on left, with Andy Malette on right enjoying the convention.*



*Simcoe Ice Company by Andy Malette.*



*It's the attention to detail that makes a great scene.*



# A NOVICE SCRATCH PROJECT: LET'S BUILD A FUEL STORAGE TANK

By Jay Mellon

Have you ever wanted to build a model from scratch, but just felt intimidated by the whole process? You just didn't know where to start? Maybe you have read a magazine article where the modeler built a locomotive from scratch, constructing hundreds of parts from prototype plans; it required a lathe and milling machine with machinist's skills to boot? And, that was enough to convince you that it would never happen. Well, maybe you just need to select an easier project to tackle. "Take it one step at a time", as they say. I do not have a workshop to speak of, so this project will employ a basic set of modeler's tools. It can be constructed in a fairly small sized space.

## Prototype

I decided to build an S scale model of a fuel storage tank that sits at my work site (**Photo 1**). Since no kit exists for this structure, it would require scratch building. This tank holds diesel fuel to supply a back-up electric power generator and has a capacity of about 4000 gallons. It sits on concrete support structures (8" thick) which, in turn, sit on a concrete pad surrounded by an 18" high retainer wall (also 8" thick). This tank resides nowhere near a rail line, but could easily be envisioned to do so. It could service any line side industry using fuel oil for winter heating or provide a fuel source for a back-up generator (e.g. hospital). So, that is what we are going to build a model of.



**Photo 1**

*Prototype tank structure from 'northeastern' view.*

The first thing we need to put together is a set of plans. I visited the prototype tank with camera in hand to take some photos and make some measurements of critical dimensions (see **Photos 1-3**). If you have ever wondered what a manufacturer goes through to put a kit together, you will soon

gain a greater appreciation after working on a scratch project. They have to select the item to be modeled, put together a set of plans, assemble the needed components to build the model, devise a straight forward sequence

to complete construction, and document this process with a clear set of instructions. I know that I will never take the whole kit development process for granted again.



**Photo 2**

## Materials

The first tool you should purchase is an S scale ruler. You do not absolutely need one, but it will make the project a lot easier. Looking at my plans produced from prototype measurements, I determined the basic tank dimensions were 8 ft. in diameter by about 11 ft. in length. So, grabbing my S scale ruler, I headed off to my local hardware store to see what I could come up with. I was initially looking for a piece of PVC (polyvinyl chloride) pipe, but did not see anything that looked good. Then, as I was browsing in the plumbing section, I spied a piece of copper alloy pipe that looked promising in a miscellaneous parts bin. I picked it up and whipped out my scale rule...BINGO, a scale 8 ft. in diameter by 11 ft. long! Serendipity can be your best friend. Having now built the model, I would advise trying to find a piece of PVC pipe, even if it is a little larger in diameter (you can scale up the support structures). It will be easier to work with.



**Photo 3**

Next, it was off to my local hobby shop to “requisition” more supplies for the project. I decided to use basswood for the retaining wall and support structures. This type of wood is easily sanded and drilled, but is denser (and thus, more substantial) than balsa wood. I selected a 1/8” thick piece of basswood that scaled out to 8” thick. For the tank ends, I chose styrene sheet (0.04” thick). Styrene is easy to cut, drill, sand, glue and paint. Finally, I purchased some brass rod (2 scale inches thick) to use for inlet and outlet piping for the tank.

## Tools

As I said earlier, we will try to keep the tools required to a minimum.

However, you will need a basic set of modeling tools that include a hobby knife, razor saw, pin vise, a set of small drill bits, small files, needle-nosed pliers, and maybe some tweezers. Your local hobby shop should have a good selection of starter modeling tool sets (e.g. X-Acto) that should do nicely. You may well already own

the necessary tools. I also make extensive use of a Dremel motor tool set. This is not required, but comes in very handy for many modeling operations. An air brush set-up is also convenient for painting the model, but is not required. You can produce some very nice results with canned spray paints (e.g. Krylon). O.K., now that we have a set of plans, our basic materials and some tools, let's get to work.

## Basic Construction

First, my basic tank material was copper alloy that was showing signs of significant oxidation/corrosion. If your tank piece is PVC or some other plastic material, you will not be concerned with this next step. I filed and sanded the oxidation material (blue-green color) off until a nice copper metallic color was achieved. Next, I cut support structures (concrete) from basswood by laying out the basic dimensions with my scale ruler and a pencil. I marked a spot that would be the lowest point of the curved section (32" from ground). Then, I took my tank piece and aligned it on end so that it would form a template for the curved section and drew the curved line with a pencil. I cut the basic support structures out with my razor saw. This left me with a basic piece with the correct outside dimensions, but needed the inner curved section removed. I did this by drilling multiple 1/32" holes around the inside of the curved line (in discard section). I then cut in from each edge through the holes with my razor saw until only the middle part was still intact. The discard piece was easily snapped loose at this point. I repeated this process for the other support structure. This left me with a fairly rough surface on the inside curved portion of these pieces. I started with a course file, followed by finer ones (curved) to remove most of the unwanted wood, and bring it to the curved line. A smooth surface was achieved with medium (150) and fine (400) sandpaper. The retaining wall is about 18' x 25'. I drew out wall sections for the length and width sections (2 each) at a scale height of 18" with my scale rule on the basswood. They were cut out with a razor saw and lightly sanded to remove any rough surfaces.

Next, it was time to work on the tank ends. I laid the tank piece on end on the sheet styrene and used a pencil to trace carefully around the curved section in order to lay out two tank end pieces. The styrene sheet manufacturer (Evergreen) recommends cutting this material with a sharp pointed hobby knife. However, I discovered that it was considerably easier to cut the curved pieces out with a good pair of sharp scissors. The desired round end pieces were not distorted by this method. Excess material and small angular corners were removed with small files and sandpaper to produce a nice curved surface for these tank ends.

## Detail Parts

Devising the detail parts for your model will require some creativity. You do not have to take it as far as I did, but I would say the general profile of the model will require adding at least the access hatch on top. I will leave it to your imagination as to what you come up with. Here is what I did.

After scrounging around a bit in my oil loading rack kits (Walthers, HO scale), I surmised I could construct a couple of reasonable-looking "small vents" (filler pipes?) that are located on the "north" end of the upper surface of the tank (see prototype **Photos**). I used end caps and small pieces of pipe from the kit to make these detail parts. I constructed the large vent from a pipe connector part and a small piece of wood dowel for the vent stem. I filled the gap in the top with a small piece of sheet styrene, cut to size and sanded to give a nice round shape. These detail pieces are a bit over-sized, but I feel they add to the overall look of the model to make it look believable.

I decided to use brass eye pins (Northeastern) to make the tank lift rings, because the "eyes" looked about the right size and provided a creditable look to the model. The prototype lift rings appear to be made from sheet steel with holes milled in; these units appear to be welded to the tank. You could do something similar by shaping small pieces of sheet styrene, drilling holes in them, and gluing them to the tank.

One detail piece that I considered essential for this model was the "man way" access hatch on top. I constructed one by cutting two round pieces of sheet styrene (0.04" thick) 24" in diameter and another piece

30” in diameter. I glued them together as a single unit with the 30” piece on one side using a plastic weld glue (Tenax 7X) (**Safety Note:** this “glue” contains hydrocarbon solvents – always use with adequate ventilation). Now, to top off this detail piece, I added some nut-bolt-washer castings (Grandt Line, large HO) that I picked up at the hobby shop. Small holes, large enough to allow the bolt part to pass through, were drilled around the circumference of the upper hatch plate so that the bolt only passed through the upper plate (not into the inner body of the part). They were carefully glued in place with gap-filling CA (cyanoacrylate) glue (**Safety Note:** fumes from this bonding agent are **toxic** – always use with adequate ventilation). The nut-bolt-washer castings really make the hatch look sharp! I added 8 of them to my hatch. The prototype has more of them, but this looked good to my eye.

Some of the last detail parts we need to devise are the hand grabs located on the “north” end of the tank. These grabs are 20” wide and protrude 8” out from the tank end. Again, after some scrounging, I discovered some “tot”-sized staples that I have had since “time immemorial” looked good to me. (I doubt you can buy these any more.) These staples are a scale 4” wider than the prototype grabs, but look O.K. to me. If you want “on-the-money” grabs, you can make a jig from basswood to give the correct width and bend them from brass rod. The prototype tank has 8 grabs, but, once again, I modified the model. Spacing them a scale 1 ft. apart looked better to me, so I decided to place 7 of them on the model. It’s your model. Do what you want. Finally, I decided to use a valve handle detail part from an oil piping kit (Walthers, HO). I also made a valve housing from scrap basswood.

## Tank Assembly

I started assembly of the tank model by drilling a hole in the tank top surface large enough to allow one of the small vents to press fit in. I encountered a fair amount of difficulty drilling this hole probably due to a dull drill bit (or it was not designed to drill metal). At any rate, because of this experience, I decided to cut the stem of the other vent piece a bit to bring these two detail pieces to the same height without drilling another hole. I was also concerned that drilling a same sized hole so close to the first one would weaken the tank structure in this area. Glue the first small vent to the tank by applying gap-filling CA over the hole/part area on the inside of the tank. We will wait to glue the second vent until later.

Next, I decided it would be easier to drill the holes for the grabs in the “north” tank end on a flat surface, rather than glued to the tank. So, one of the tank ends was selected and the scale rule was used to place pencil marks as indicators for holes to be drilled for the grabs. Holes were drilled by means of a small bit held by a pin vise. Once the holes were drilled, both tank ends were glued to the tank with gap-filling CA, one at a time. Allow the glue to thoroughly dry before proceeding to the next step.

It turns out my tank ends were a bit larger in diameter than the tank, so once the glue was dry, I filed and sanded them to achieve the required 8-ft. diameter. In addition, one end of my tank had a slight inward flare (probably for a hose connection), resulting in a tank diameter of less than 8 ft. at that end. In order to rectify this situation, I filled the gap at each end between the end piece and tank wall (cylindrical) with modeling putty (Squadron green putty). Allow this putty to dry thoroughly (overnight). Then, using medium (150) and fine (400) grade sandpaper, remove the excess putty material to yield a seamless transition from the cylindrical tank wall to the end wall.

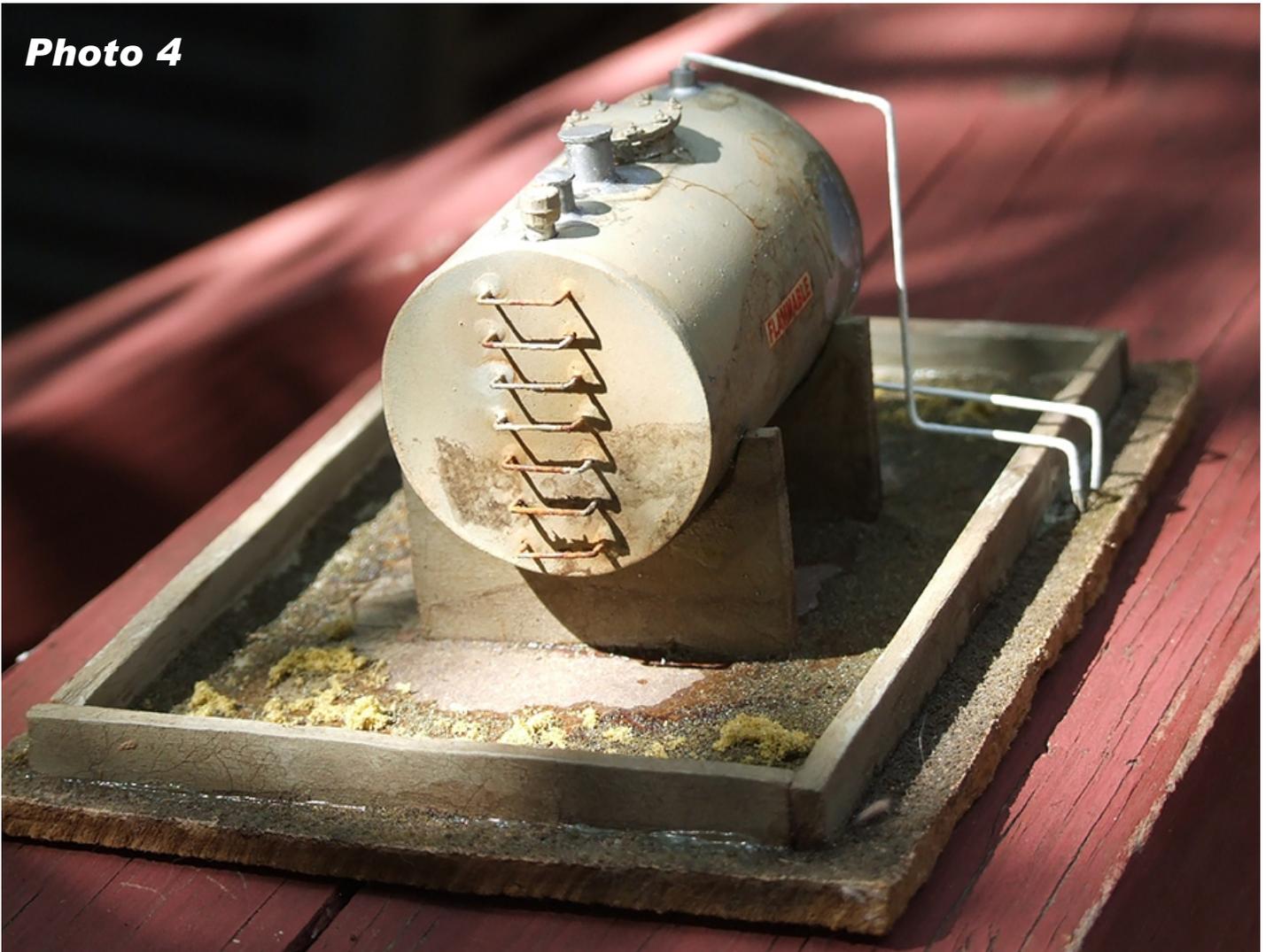
Now, it’s time to attach detail parts to the tank. I cut the “stem” portion off the second small vent to bring it to the same height as the first one and glued it to the tank with gap-filling CA close to the first. I drilled holes in the top surface of the tank (central axis) about 30” from the ends to insert the lift rings. Glue in place with gap-filling CA and hold in place several minutes while the glue sets up. Make sure the rings are oriented in line with the longitudinal axis of the tank (not at right angles to it). On the prototype, the access hatch is centered on the top surface of the tank. However, on the model, this same spacing gave a “crowded” look to the “north” side of the tank. Thus, the model access hatch was shifted a scale foot or so towards the “south” end of the tank to relieve this “congested” look to the model. Glue in place with CA. The large vent was attached to the top of

the tank with gap-filling CA between the access hatch and the “north” lift ring. The grabs fit loosely in their location holes. So, I applied a small drop of CA to each hole, inserted the grab, and held it in the proper orientation for several minutes while the glue set. I did this for each individual grab. The turn-off valve housing was glued to the bottom of the “south” tank end with CA. The turn-off valve wheel will be added to the model later.

A tank support platform, 4” x 5.25” (real inches, not scale) was cut from scrap masonite (1/8” thick) to serve as a base for the model, as well as the concrete pad present with the prototype tank. The masonite base was oriented smooth side up. The locations for the retaining wall pieces and tank support structures were marked with a pencil, and were glued in place with carpenter’s glue (yellow) which is impervious to water when dry. That concludes most of the tank construction (see **Photos 4-6**). Next, we paint it.

### Painting/Decaling

**Photo 4**



As said earlier, an air brush apparatus is nice to have for painting the model, but not necessary to achieve good results. I painted my model with canned spray paints (e.g. Krylon). (**Safety Note:** These paints use hydrocarbon materials as propellants...hazardous to breathe. **DO NOT** paint indoors. Use these products in an area with plenty of ventilation...like outdoors.) Since my tank is constructed from a copper alloy (bare metal), we need to paint it with a primer before the final coat. If your tank is made from plastic polymer (e.g. PVC), you do not need to be concerned with this step. I painted my tank with a gray primer. Despite what the directions on the can said (“fast-drying”), the painted model remained “tacky” to the touch for several days. I

allowed it to thoroughly dry (3-4 days) before proceeding. Next, it was time to give the tank its final coat of silver/aluminum (local hardware brand). This coat of paint dried fairly quickly (about 2 hrs).

**Photo 5**



I decided to use some left over decals from an oil tank kit (Walthers) for safety signage on my tank model. They were applied to the tank according to instructions with a decal setting solution. I want my tank model to fit in the 1960s era. Modelers interested in a more modern era (post 1980) will need to apply some sort of material safety data insignia (see **Photo 1**). Next, a coat of Testor's Dull Coat was applied to the tank. The directions warned not to apply this product over metallic finishes, apparently due to the "dulling" effect. I tried it on a scrap piece of styrene sheet first. It produced an "oxidized", weathered look to the paint that was exactly what I was looking for on this model. If you want your tank to sport a fresh-looking coat of paint, do not use a dulling surface product on it.

The entire tank base/"cement" pad was painted with a brush using Floquil "Concrete" (new formula), including the retaining wall. The valve control wheel was painted red with Testor's hobby enamel (small bottle) by brush. That takes care of most of the painting.

### **Final Details/Finishing**

The inlet/outlet piping was formed using the brass rod with a good pair of needle-nosed pliers. The configuration I used was not as complex as in the prototype (fewer turns), but I think looks convincing. I formed them by trial fitting with plenty of "eye-balling". The piping pieces were painted white (as per prototype) with Testor's hobby enamel (by brush) and allowed to dry.

I wanted to simulate the portion of the model base outside the retaining walls as grounds surrounding the tank. So, I painted this portion of the base with "sand" colored flat latex and sprinkled on "earth" colored and "burnt grass" colored ground foam (Woodland Scenics, fine grade) to give the impression of grass-covered terrain. In addition, I added pale yellow-colored coarse foam inside the retaining walls to give the effect of

dead leaf material. Next, the tank itself was secured to the support structures with gap-filling CA. Be sure it is evenly spaced before the glue sets. Allow the glue to fully cure before handling the model much. Holes were drilled into the tank base and turn-off valve housing (side) to attach the inlet/outlet piping with CA. Finally, a small hole was drilled in the center of the valve housing to mount the valve control wheel (with CA). How much weathering you do depends on the look you are after. I used the Bragdon “Weathering System” to add weathering effects to the concrete support structures and base, along with the tank itself. The finished model is shown in **Photos 4-6**.

So, there you have it. That wasn’t so bad, now was it? You have been exposed to all facets of scratch-building a model. Now that you have some experience, you can take on a more complex project next time. Until then.



### **Addendum**

This S scale tank model was originally constructed in 2004. It turns out this model was subjected to an unanticipated weathering process. It sat in hurricane (Katrina, 2005) flood water for about 6 weeks, resulting in severe damage to the model. The model was recovered, but procrastination ruled before the model was re-built about 10 years later. It required construction of some new tank vents that were lost, as well as re-gluing the tank to the support structures, and some additional painting. Thus, this weathering technique is not to be recommended. I would, instead, recommend more traditional methods of weathering the model.

# Developing an Industrial Scene...

## It's All About the Details

### Part 1



*This site is part of a factory complex near where I live. They transload plastic pellets here, as well as, fill the white silos. The whole site has a lot of visual appeal for a model railroad site. This view looks east.*

**By Glenn Guerra**

Industries and sidings on our model railroads are interesting features that add visual appeal and operating possibilities. Sidings with industries make our layouts look active and provide backdrops for our scenes. When operating our layouts, we need destinations for switching. Industry scenes provide just that. When selecting what industries to put on a particular siding, we have a lot of choices to make. If we are modeling a specific era, we would need to select a building type to match. For example, a modern steel building would look out of place on a model railroad depicting the 1930's era. If we are modeling an urban setting, an old wood grain elevator may look out of place. Therefore, the selection of the industry and building type can be important to the overall theme of our model railroad. Once we have some ideas on types of industries we would like to have, the next problem becomes making it fit.

Let's go back to the era for a minute while discussing fit. Around 1960, I was 10 years old and my mom had a horse. We would go to the farm store in Lake Zurich, Illinois to buy feed for the horse. The farm store had a siding off of the Elgin Joliet and Eastern railroad and, being the uncontrollable kid I was, I headed for the loading dock every time we went. The building was not much more than 120 feet long. Bag feed came in 40' box cars, and I would go in the box cars and look around. One day the train was spotting a car while we were there. Wow! I stood on the dock as they spotted the car with a Baldwin center cab transfer engine. Enough of my reminiscing, the point I wanted to make was that railroads spotted cars at small buildings at one time.

After the financial troubles of railroads in the 1960's and 1970's, many of these small customers started to disappear. The railroads could not afford to service them or compete with the trucking industry. Today, not only are the industries are much larger, so are the cars. If we are modeling a more modern era, we have a lot of trouble getting it all to fit on our layouts. The solution is to model only part of the building as a flat against a wall. Modern buildings tend to be rather plain though. What makes them interesting, are the details relating to the industry that are around the building.



*This Google Earth view of one of the Bemis Custom Plastics facilities gives you an idea of the size of the whole complex. I also marked the farm co-op siding which is another good candidate for a model railroad industry.*

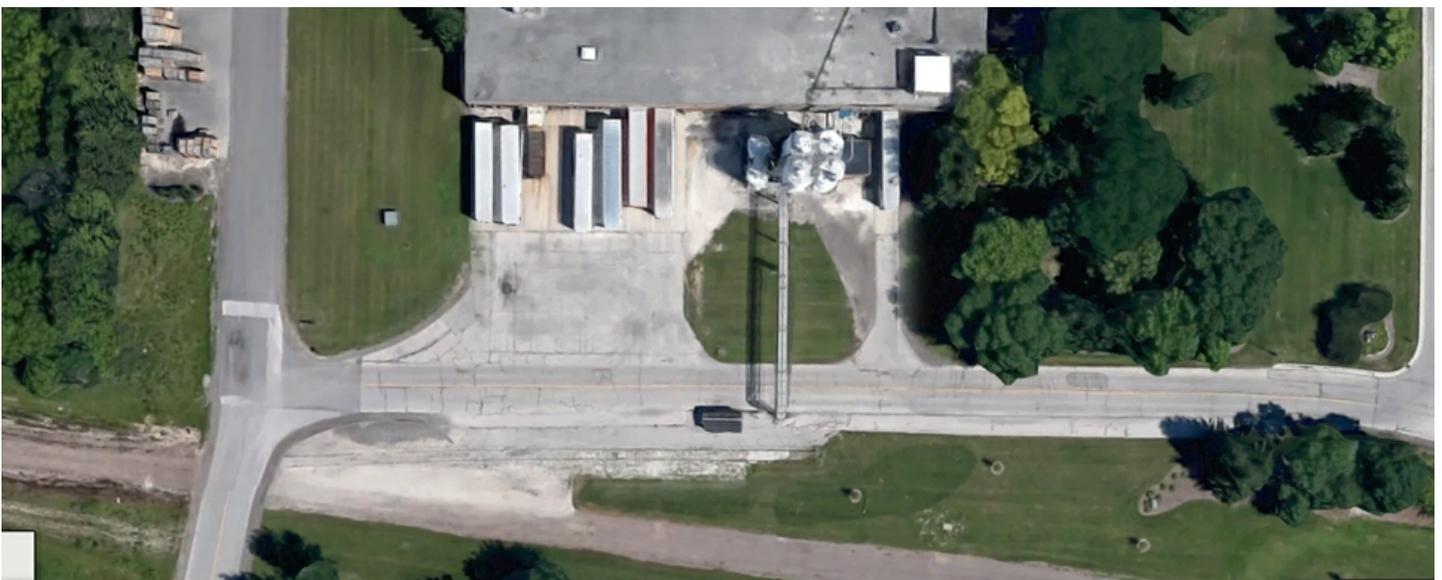
Near where I live is the industrial plant complex of Bemis Custom Plastics. They produce plastic products for the food packaging industries around the area, as well as, components for other industries. They are located on the old Sheboygan and Mississippi Railroad. I like railroad history so I had to throw that in. This became the Chicago and Northwestern main line from Sheboygan to Fond Du Lac Wisconsin. Later it became Union Pacific until they gave it up around ten years ago. After the Union Pacific, the State of Wisconsin purchased it to add to their other rail lines. After a long battle political battle, and much government bureaucracy, the line was rebuilt and Bemis has rail service again. Today, the service is provided by the Wisconsin and Southern Railroad, the contract operator on all the state owned rail lines in Wisconsin. Above is a photo from Google Earth of the whole complex so you can see how big it is. We could not model this whole complex like we could with the small farm store I remember. However, what we can do, is model the part of the complex where the rail activity takes place.

Apparently, when Bemis started this facility, there was no siding built into or near any buildings. Instead, a siding was built that resembles a team track. I marked the location on the Google photo. In fact, this siding is a team track. In the Google photo, you will see an industry named Rockline Industries on the left side of the photo. They have a trucking division that transloads plastic pellets from the team track at the Bemis location to other Bemis plants in the area. Rockline also transloads plastic pellets from the team track in Plymouth Wisconsin, eight miles west of the Bemis siding, to other plastic industries in the area. Team tracks can be their own modeling idea, and I did an article on them in the [January/February 2014 issue of THE O SCALE RESOURCE](#). It is still on line, and if you want some other ideas, take a look.



*Here is a photo of the farm co-op marked on the previous photo. This is a good example of an older industry where the size of the buildings are much smaller. An industry like this can be modeled with the whole building. A complex like the Bemis facility down the tracks a way cannot be modeled in its entirety. We need to focus on the Bemis siding only.*

The whole rail line from Plymouth to Sheboygan Falls was completely rebuilt, and all of us rail fans in the area were excited to see it happen. We all took many photos of the rebuilding as it progressed. I kept looking at this siding that Bemis had thinking what an ideal model siding it would be. There are a lot of interesting things here and a lot of variety for operation.



*This is the area around the Bemis siding that we will make a model of. There is a lot of visual interest here. This view shows about 650' width by 250' depth of the complex. That would be an area around 10' wide by 4' deep on our model railroad. Even though we are going to focus on only this area, we will still need to change some things to make it fit a model railroad. When deciding what to cut out so we can make this smaller, we need to look at what parts of it add the most interest to the final scene on our model railroad.*

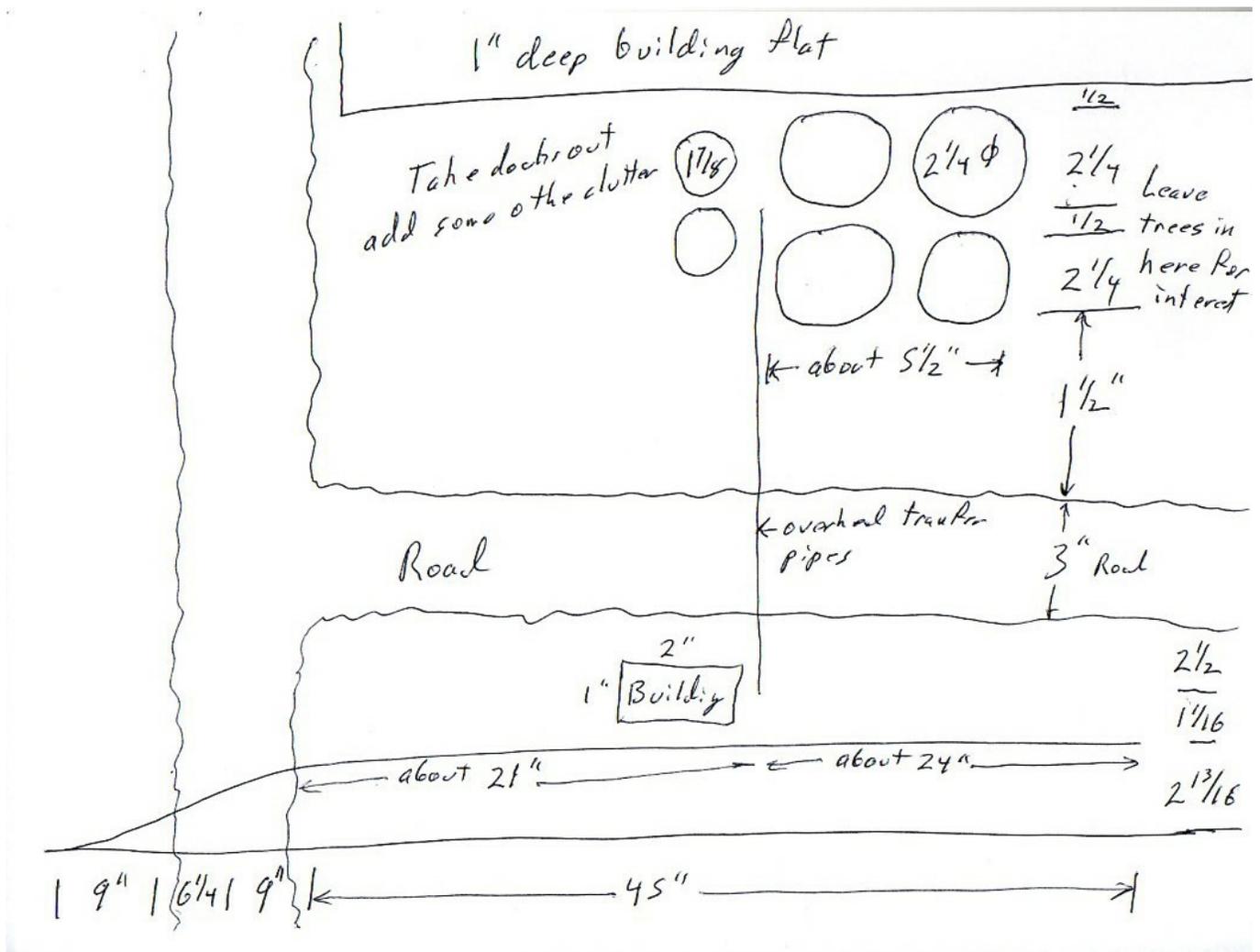


*This view of the team track shows a truck transloading some plastic pellets from one of the cars. The support for the overhead lines will add a lot of interesting detail to our model. The small house has the blower equipment in it for sucking the pellets out of the cars and blowing them through the overhead pipes to the silos.*

When I was looking at the plastic pellet storage silos, the amount of detail was interesting. I thought the overhead transfer lines were interesting also. These transfer lines move the storage silos near the building and away from the track so trucks can pull up to the tracks to transload. Look at the factory building itself. It's very plain with just a brick wall and a few simple windows. The details are in the silos themselves and all the transfer lines from the track. These are the features we want to incorporate in our model. During the rebuilding of the railroad, two more car lengths were added to the siding, but we could model it as the old two car track. After looking at all of this for a while, I thought this would be a good article for a building project, so let's see what we can do with this site.

When we decide to model something, we need to consider how we are going to do it. Part of that consideration is whether we will scratch build the whole thing, part of it, or modify an existing kit. What I will try to do here is go through a thought process of how I would model this site. The way I will do it is not the only way, but hopefully the thought process will guide you through some of your own decision making.

When I look at this site, the details on the silos and transfer piping are where the interest is for me. For this reason, I want to spend time on these details on my model. The brick building is rather plain and lacks detail. To save space, I will make the building a flat against the wall. Notice there are truck trailers backed up the side of the building. If we did this in S Scale, we would need about 10" for a 53' scale truck trailer. In addition, we would need about nine more inches in front for the truck to maneuver when backing the trailer in. This will take up a lot of hard-to-get space on our model railroad. Since the interest for me is the silos and transfer lines, I think I will eliminate these truck docks from my model. This will allow me to shorten the distance from the silo to the track. Since part of the interest is the overhead transfer lines and the transload ability, I want to keep the road between the building and the silos. These are some of the first considerations, and I have started to make some selective compression of the site. Try to identify what are the interesting parts of the scene so you can keep them represented in the final version.



*I made this sketch of the site so I could get some idea of the space requirements. I work in CAD quite a bit, but we don't need that here. The advantage to CAD is the precision and the ability to go to a computer operated machine. For this project, a simple sketch will work just fine. Don't over complicate your life if it isn't necessary.*

It's best to make a sketch with some dimensions on it next. In my case, I don't have an existing space that I am trying to fit this in. If you do have an existing space, start with those dimensions on your drawing first. I made my sketches free hand to show that you don't need fancy CAD drawing software to do this, just think through the steps. I decided I would start from the main line. If you notice in the photos, the siding at Bemis is not parallel to the main line. To save space, I think I will make it parallel. Now, we need some dimensions to work with. The NASG has standards on their website, [nasg.org](http://nasg.org), and that will help us. On the home page, click on the NASG button on the left and you will get a menu with the NASG standards on it. In section S-7, you will find the track clearance standards. Since we are modeling a modern facility that will be using modern large capacity cars, I think we should use the modern standards. Dimension P is the clearance to a dock of a modern car, and this will give us the car width. For a modern car, NASG recommends 1-1/16" from track center to dock. In standard S-8, NASG recommends 2-7/16" for track centers on a main line and 2-13/16" for a siding. I would add another consideration here. If this were a busy main line, I think the railroad would move the siding away from the main line more to keep the industry people away from the main line. In our case, the main line was little more than an industrial siding itself when the Bemis siding was put in. We could probably use the 2-13/16" dimension for our model. If I was doing this on a busy main line, I think I would make the siding a little farther from the main line. I may also consider adding a fence between the main line and the siding. So, starting from the center of our main line we have 2-13/16" to the center of the siding and 1-1/16" from the center of the siding to the side of the car on the siding. We have now used up 3-14/16" or 3/7/8" of our space.



*This silo complex is just dripping with detail and begging for someone to make a model of it. The detail is all in the silos and the building is rather plain. The trees in the background will fill up an empty space to the right of our model. I am not sure what to do about the loading docks though. Those 11-1/2" long trailers in S Scale may take up too much room.*



*This view of the area is from the road crossing at the east end of the Bemis complex. The company spends a lot of time keeping the grounds up. The lawn, trees, and mulch around the trees will add a lot to our scene. This track was a main line at one time, but today it is a ten mile long industrial spur.*

I want to model the small building next to the siding and have room for a truck to park and clear the road. To do this, I think we should add about 2-1/2" to our width dimension, so we now have used up 6-3/8" of space. For the road, I think I will use 3". I could use less, but I think the longer run of the transfer pipes would look good. So, now we have used up 9-3/8" of depth space on our layout. Next comes the silos.

The silo complex could be made out of styrene or brass. Each has some advantages. The styrene is easier to work with for most people, so I will use it. The brass would give more durable details for things like the ladder cage so I may consider making them out of brass. The alternative is to buy some Walthers HO scale components like this and work them into our structure or scratch build them out of styrene. The tanks themselves should be fairly simple to make out of styrene tubing. We will work more on those details when we build the silos. The first thing we need to do here is come up with some rough sizes.



*This view of the area we want to model looks west. The road with the overhead transfer lines is a feature we want to try and get into our model scene. To save space, we will probably make the siding parallel to the main line. These are some of the things to consider when trying to fit a scene into our model railroads.*



*Here is a view looking north at the area we want to model. There are some details here worth noting. I like the small knoll built into the landscaping under the trees to the right. Since the siding will be around 45" long, we need something to take up space to the right of the silos. This group of trees is just what we need. We want to be sure to include the knoll for interest.*

I am going to make some assumptions here. It may not always be possible to get up close to what you are modeling to gather dimensions. These tanks were probably made in a fabrication shop somewhere and brought here by truck. I am going to guess they are around 12' in diameter so they could be transported on the highway. That would mean we need to find some tubing around 2-1/4" in diameter. For now, let's use that dimension. Notice there are four tall silos in a nest. At 2-1/4" diameter each and 1/2" between them and 1/2" between the silos and the building, we are using another 5-1/2" of railroad so we now have used 14-7/8" of our railroad space from our main line track center. I would like to model the building as a 1" flat against the wall, therefore, we have now used 15-7/8" of layout depth. Lastly, we want to add some room between the road and the tanks. The green lawn looks nice, and I think I would like to have it in the model. Let's use 1-1/2" of green lawn. That will also make the span of our overhead pipes longer. The total depth now is around 17-3/8" from our main line track center. Next, let's see how much lateral space we need.

The switch for the siding is partially in the road crossing. I think I will do the same thing. That keeps the moving switch parts out of the crossing, and lessens operating problems on our model. I will use a #6 frog which is about right for an industry siding. For the dimensions, refer to the NASG standards again and see the RP-12 Turnout Dimensions. Open the pdf file for the track standards you will use. I am using the Standard Straight Turnout. If you use Hi Rail track standards, use the Hi Rail Straight Turnout standards. Let's start at the switch points. We will use dimension 8 on the switch diagram to start with, and the standard says that is 8.859" for a #6 switch. We will call this 9" for ease of calculating our space. That gets us to the frog of our switch, but we need to get to the point where our siding is parallel to our main track. Dimension 25 will show where the frog would be on a cross over, and using the 9" dimension from that frog to the points on the adjacent track, would give us an idea of where our siding would be parallel to our main track. Dimension 25 is contingent on the track centers. Since we are using 2-13/16" for track centers, that is about 15 scale feet. Notice dimension 25 is for 13' track centers and we need to add 1.117" for each scale foot of track center. I am going to call this 1.125" or 1-1/8" for ease of calculation. We are using 15' scale track centers and need to add two more feet or 2-1/4" to our 4" distance called for. We now have 6-1/4" between the frogs on a crossover. Add this to each switch in a cross over, and we have 9", switch on the main, plus 6-1/4", frog to frog dimension, plus 9" frog on siding to points on siding, and we get 24-1/4" to the point where our siding is parallel to the main.

The next consideration is the car length. This will give you some wiggle room in fitting a scene to your space. A modern cylindrical hopper for plastic pellets is around 60' long or 11-1/4" in S Scale. I would like to have room for four cars on the siding, so I would need 45". Add that to the 24-1/4" I need for the switch, and I now have 69-1/4" for the length of my scene. Maybe I need to rethink my idea. If I scaled back to two cars, I would only need 22-1/2" of track for a total space of 46-1/4".

At this point, we now have a better understanding of our space requirements and can go back through the whole design. The whole silo complex will be around 13" wide. On a 69" wide scene, the silos are going to seem insignificant. The whole scene is about them, and we don't want to overpower them visually. On the left of the scene, the road crossing is after the switch, and I think that visually takes the switch out of the scene. That will shorten the visual space of our scene by around 24". Now we are only looking at the four cars on the siding or around 45". We have some factory buildings to the left of the silo complex that we can model. Since we are thinking of removing the truck docks to save space in depth, we will have a lot of bare building wall to deal with. There are lots of pallets stacked up in the parking lot just to the left. We could put some of them in front of the building. That would add interest and not use any more depth. We could also shorten the building a little. I like the trees on the knoll on the right and think I would like to keep them in the scene. These are some of the things we can consider now that we have some basic dimensions of the scene. You can see how even a quick sketch can give you some idea of the space requirements. It can also show you where you can maneuver to get more room. Maybe we can use a shorter switch. Tomalco and now Fox Valley models have switches of different frog numbers. Use the same calculations to see how a frog number change will change the overall dimensions. The silos are located at about the center of the siding. If we make a two car siding instead of a four car siding, we could take out some of the trees on the right and some of the building on the left. These are all things to consider, and it is much easier with a sketch.

Now that we have a general idea of how the scene will look, and what size it will be, we need to think of how we will build it. I am going to build the silos next. Some of the final dimensions on them will be dictated by what is available for materials, and I will detail that in the next article. In that article, we will finalize the dimensions of the silos based on what materials can be found. Then, we will start building them. See you next issue.

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# Adventures In S Scale

## George Sorensen's Journey.

By Glenn Guerra

When I was at the get together in Rockford, Illinois, I met George Sorensen who is a member of the State Line S Gaugers. While we were talking about their group, George was telling me about the American Flyer accessories on the club module layout. He seemed to know a lot about them. I asked him if he had American Flyer equipment and a layout at home. The answer was yes on both accounts, but there was a twist. George said he was starting a new layout that would be more of a scale layout than an American Flyer layout. This caught my interest. What did he do before, and why the move towards an S Scale layout? Well, that lead to another visit with George to find out what was going on. Here's his story.

George started when he was around two years old. His dad had an American Flyer set mounted on a 4' x 8' piece of plywood and they would play with the trains together. George told me it was around the time he was 11 that he started getting more into scale model trains. The reason? Many of you will be able to relate to this, I know I did. It was money. Where do kids get money? From paper routes and chores around the house. I sold magazine subscriptions door to door to get enough points to get the model prizes they offered. I would collect the pine cones from my grandmother's yard to paint them and make Christmas Tree ornaments to sell door to door. Money was tight, and all George could afford was HO scale equipment, so he started modeling in HO Scale. This lead to an interest in scale modeling.

Moving forward in life – school, work, relationships, family, and so on get in the way of modeling. But, there is hope, and it comes in the form of children. Remember how so many of us started by playing with trains with our parents. George's son, Eric, had an interest in the trains so they were off on building a new layout. What happened next is interesting. George said his son had trouble putting the HO trains on the track and he remembered the old American Flyer sets he still had in the closet. Out they came and a new train layout was in the making.

Since George had spent a lot of time making scale models and scenery on the HO layouts, he did the same with the American Flyer layout. They built mountains, buildings and all kinds of scenery on the layout. While we were looking at photos, George mentioned all the automobiles on the layout. George has a passion for cars as well that rubbed off on his son. At least that was the excuse for all the cars on the layout. I suspect some of it was George also. All was well until one day a coupler fell off of one of the old American Flyer cars. George thought, no problem, we will just go to the hobby store and get a new one. He was in for a rude awakening.



*George helping his dad build the first American Flyer layout they had.*

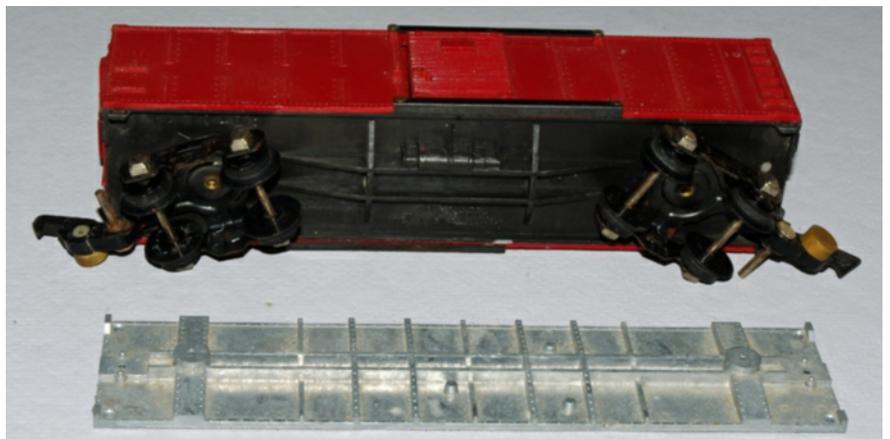


*George at the controls of the layout he built with his son. They use American Flyer track on this layout, and were also experimenting with scenery and making buildings.*

The conversation went a little like this: “Mr. hobby store clerk we need a new coupler for our train model. Good sir, those trains have not been made for a long time. Now what do we do? Well, I would recommend going to some train shows and see if you can find someone who deals in old trains. Are there such things? Yes, and they are getting popular with collectors. My trains from when I was a kid are now collectable? Boy, I guess I am getting older. Well son, let’s go to the train show next weekend.” Here’s the conversation at the train show: “Look at all of these American Flyer trains! I always wanted one of those cars as a kid and could never afford it. Tell you what son, I will get that one for you and this one for me. The wife can’t get too mad, it’s for the kid, right?”

So, George was off on a new venture in model railroading. He had been bitten by the collecting bug. All those trains he could never afford when he was young were now on shelves and the layout. Then came S Scale trains. American Models and S Helper Service were starting to make S Scale trains, and a lot of what they had to offer was not available in the old American Flyer line. These models had more detail than the American Flyer models also and that appealed to George. He was also modifying some of the American Flyer models to more scale appearance. How many of you remember the ACE Models line of conversion castings? They made castings that would replace the American Flyer underframes with a more detailed underframe that would accept scale trucks and couplers. George would buy cars at the train shows that were in bad shape and rebuild them.

*George showed me an old ACE Models metal underframe made to replace the American Flyer underframe. For a long time, this was a way of converting these cars to a more scale appearance.*





*These two views of the layout George built after his son had moved away show some of the kit buildings and scenery he was making at the time.*



*This scene on George's first S Scale layout shows some of the nice scenery effects he was modeling. He was still running a lot of his older American flyer equipment on this layout, and he was having fun creating the scenery.*

Well, eventually Eric grew up and went away to college. George got a new job and they decided to move to a different house. George was able to get a train room out of the deal, and started in on a new layout. By now, Lionel had picked up the old American Flyer line and was reproducing some of it, as well as, introducing new cars. George had been buying some of that for the layout he and Eric had built. Lionel had made some sets that were never in the old American Flyer line. The S Scale interest was still there though, and George built this layout with scale looking flex track.

George used track from S Helper Service and American Models that had a large rail so he could run his high rail equipment. This track would also accept a scale wheel. I was curious about the switches. Track and wheel standards should be compatible for reliable operation. I have talked with other modelers who have tried to mix scale and high rail wheels on the same layout. George said the four wheel freight trucks seem to work reasonably well with scale wheels. He has noticed the long wheel base passenger car trucks will not work very reliably with scale wheels on high rail switches. For this reason, he leaves the high rail wheels on those cars. There seems to be a tug of war going here for George between the high rail and scale. He has found a solution that will work for him, and we will get to that.

For now, let's get back to the scale layout built in the new house. As I stated, Eric was off at college and George and his wife had moved to a new house, so it was time for a new layout. George had been buying some scale cars from S Helper Service and American Models. He was getting them with high rail wheels to run on the American Flyer track from the layout he and Eric had built. The new layout would be a new start, and George decided to go with a more scale track. Much of the equipment he was buying now had scale wheels. He was still interested in a more scale-appearing layout, but by now, had a lot of high rail equipment. When building this layout, George built most of the structures from kits. Look at the photos of the layout and you can get a feel for some of the scenery George was incorporating into the layout.

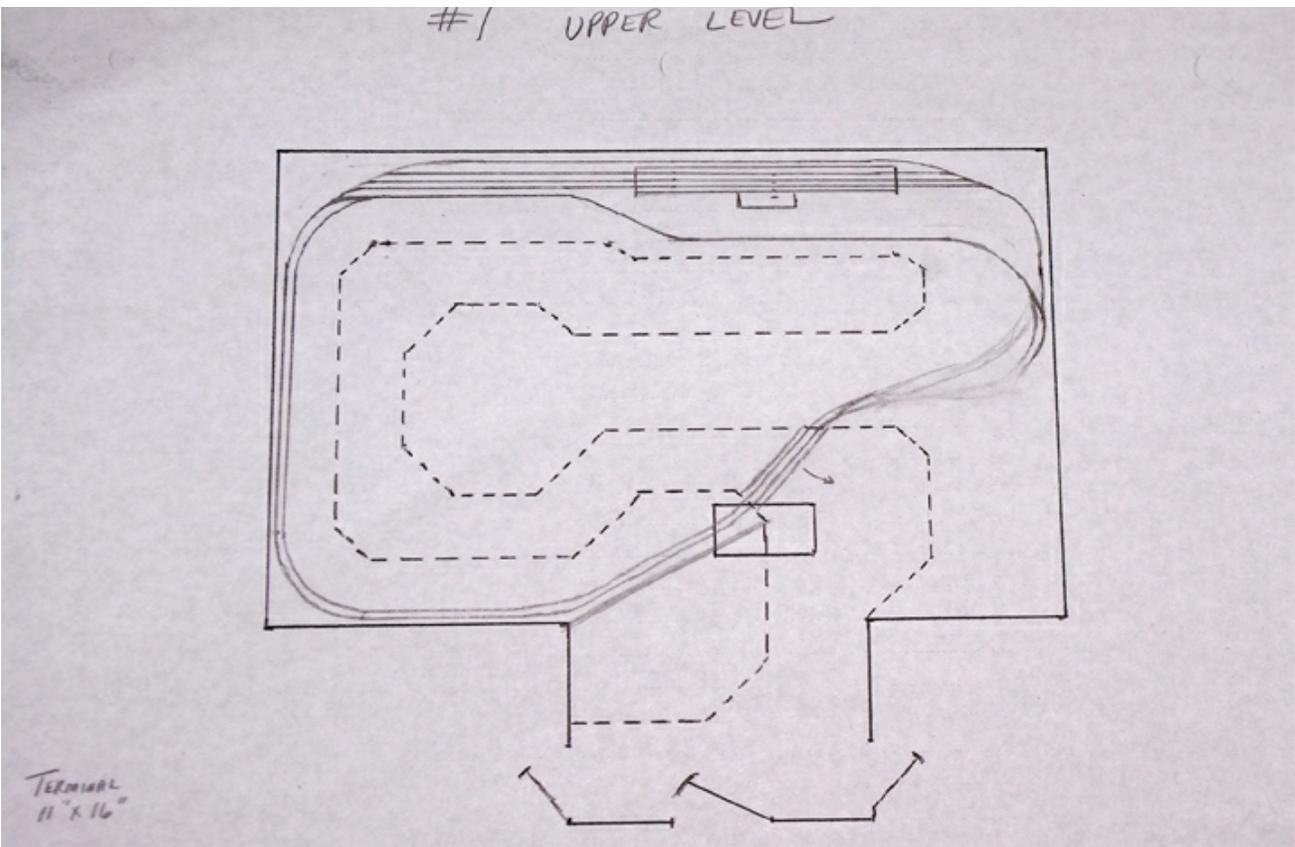
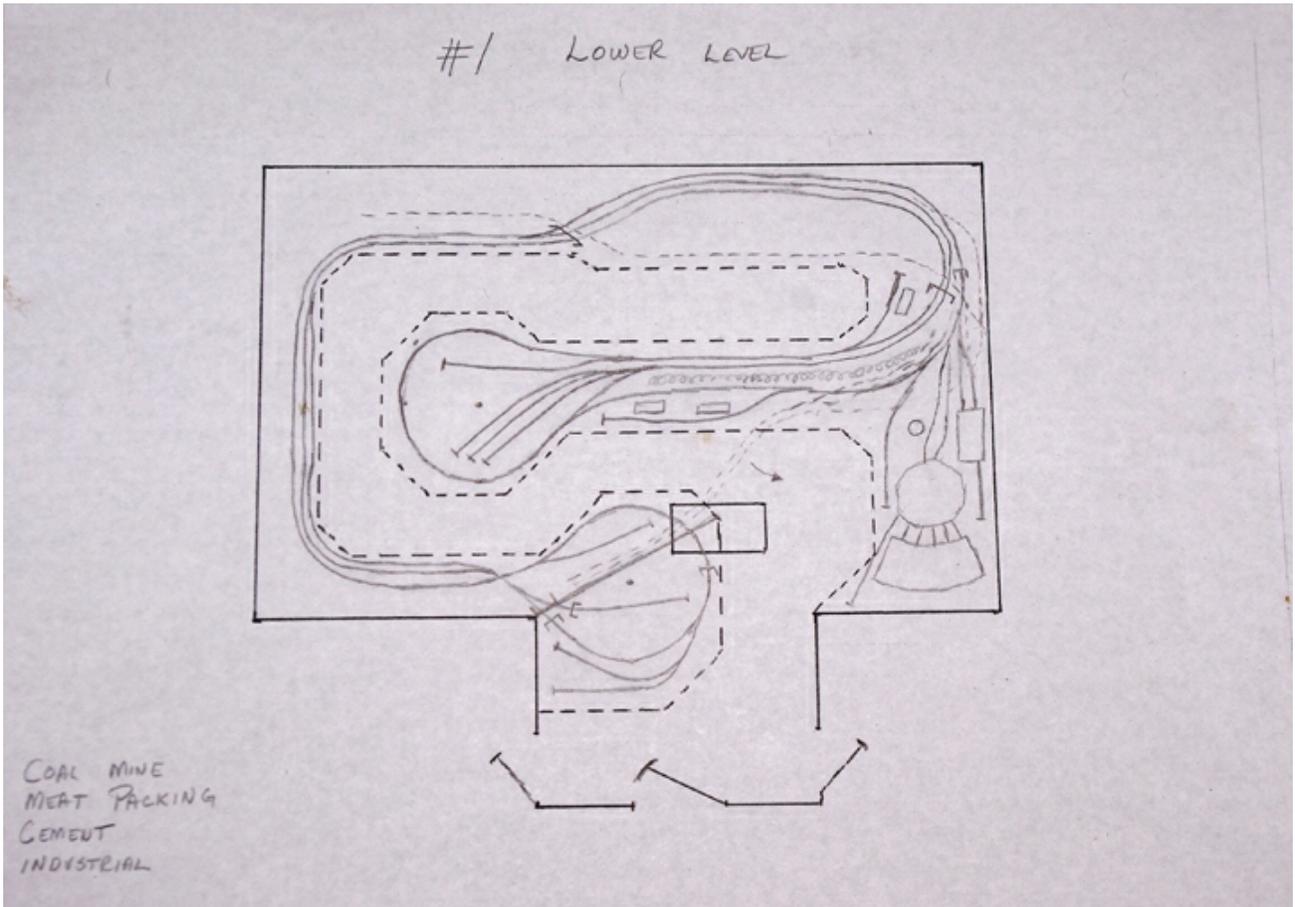
Operation was still limited though. George was telling me most of the old American Flyer equipment was AC current. Around 2002, George could not resist the temptation and bought some American Models locomotives. The speed control was better on these, and some of them ran on DC. This started a switch from AC current for the layout to DC current. George was converting some of his American Flyer equipment from AC current to DC current with new can motors. This improved the performance of the models, and some even got scale wheels put on them. George had a lot of equipment by now, and this conversion could not be done on all of it. Some of the train sets were his original sets, so they were not converted. Others were very collectable sets in good condition, and he felt they should stay that way. There were, however, a lot of models that were in tough shape and needed a lot of work anyway. Besides, George was a modeler and wanted to improve the performance on some of his engines.

The next big step for George was S Helper Service LocoMatic™ control. This was a form of control that allowed ringing the bell or blowing the horn separate from the speed control of the engine. It also allowed headlight control. Lastly, it had some sound. This was getting close to real locomotive control.

Another phase of life came along. George decided to retire and was talking over with his wife where they should live. Her side of the family had a small summer home by a lake, and they decided to buy that. So, the bigger house was sold, and they started on a multi-year rebuild of the summer house. It was the right thing to do. They have a nice home, and George could stay active with the State Line S Gaugers. Now, it was time for a new layout, so planning got under way.



*The start of the new layout. You can see some of the framing for the upper level on the left. Most of the track, buildings, and equipment will come from the old layout. George was showing me the momentum control on his locomotives, and I can tell he likes the DCC control.*



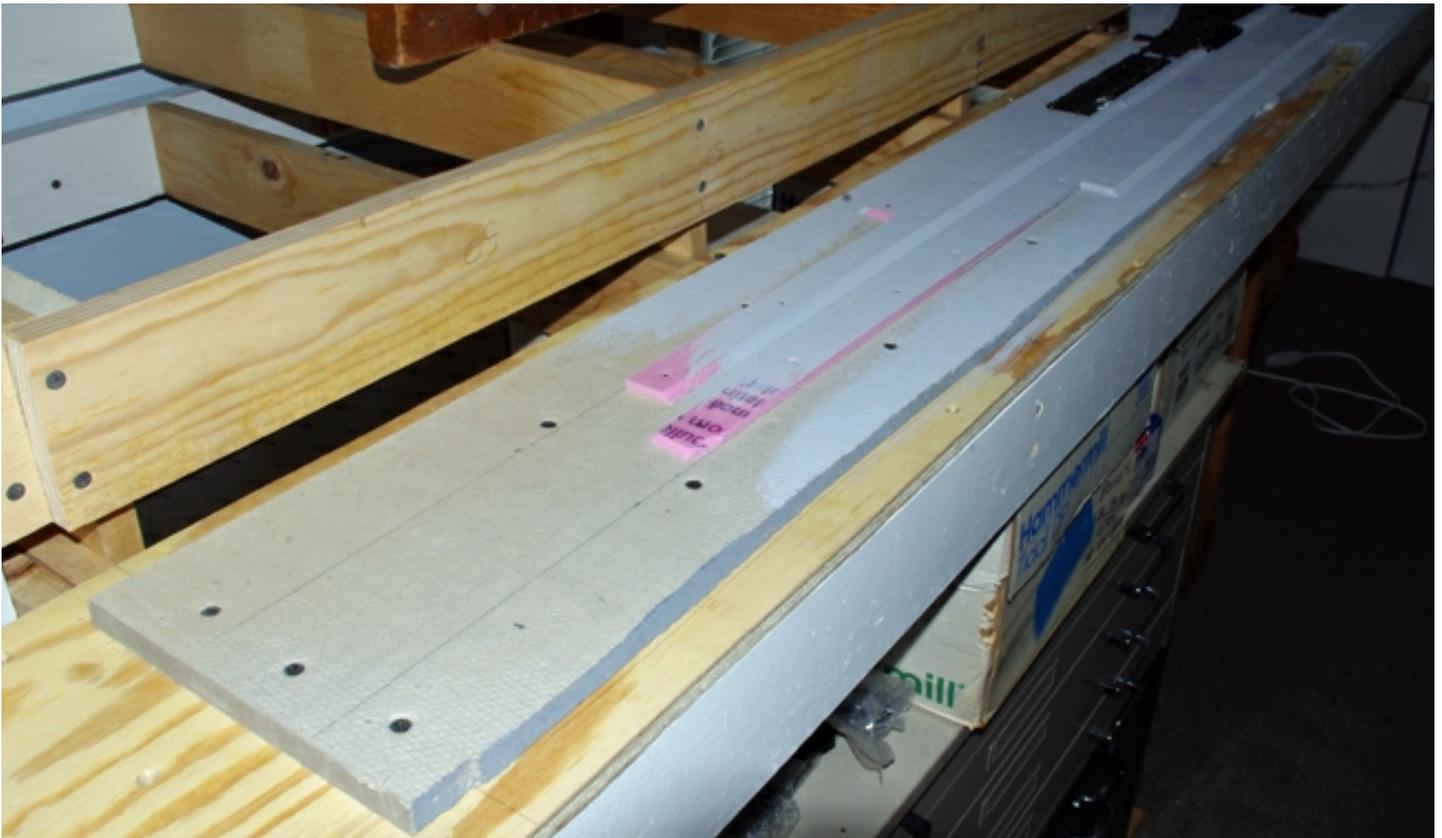
*The plans for the new layout. The upper plan is the DCC controlled lower level. The bottom plan is the AC controlled upper level for the traditional American Flyer equipment.*



*The bottom four shelves are the trains George had when he was a kid. The other trains are from his dad or were purchased when his son, Eric, was young. There are many other cases full of American flyer trains, but these are the special ones.*

In the time George took down the last scale layout and now, DCC control has really been improved. The new layout would have to be DCC control. George was showing me some of it on the start of his new layout. I can tell he is going to like it. The problem is converting all the locomotives. Besides the cost, what about the collector value? That was solved in a few ways. The first was to get rid of some of the equipment. George had been buying a lot of Lionel American Flyer equipment, and decided some of that could be parted with. The older original American Flyer equipment would be saved. The other part of the solution was the layout. George designed two layouts combined as one. He would have a lower level that would be for the scale equipment and would be DCC control. He would use the American Models track from the old layout for this level. This would allow scale and high rail wheels to operate. He would also have more industry track to switch and have fun with the DCC control.

The upper loop on the new layout will be for the classic American Flyer trains, and will have AC power. This way George said he can run his trains from when he was a kid whenever he wants to. The upper level will have flex track with ballast and have scenery, but it will be for the classic trains only. This is a nice compromise. George can satisfy his modeling desires, and not compromise the collectable trains.



*Notice the pink foam George is using for roadbed. This looked like a good idea. George said he bought a 4' x 8' sheet at the home store and cut strips with razor blades. He made a fixture to cut them, but has loaned it to a friend, so I couldn't photograph it.*

I noticed how George was laying the track on the new layout. He said he likes the Homasote as a base and salvaged a lot from the last layout. For roadbed, he is using 1/4" pink foam insulation from the home store. He made a fixture that held a razor blade and was able to cut off a lot of strips in very little time. Unfortunately, the fixture is off on loan or I would show you how it worked. The foam is very flexible and looks good. It is just high enough to give you a good ballast edge.

George is active with the State Line S Gaugers, and helps work on the display layout. When the layout is at a show, George likes to talk to new people about S Scale. We talked about this a little at lunch when I was visiting. George said he likes to build kits and create scenes on his layout. He said the modeling he did when he was 11 years old on his HO scale layout was always in the back of his mind. It was that urge to create, tinker, build, or whatever you want to call it, that George has. What started as a venture back to S Gauge with his son took him to S Scale. The availability of good quality scale models has kept him there. He is finding ways to satisfy his modeling desires, and still cling to the traditional American Flyer sets that got him started in the hobby. As a result, George has been able to strike a nice balance in his hobby.

# WHAT'S ON YOUR WORKBENCH TODAY?

This series shows our readers what other modelers are working on, and we need your help to make it successful. All that's needed is a simple snapshot of what your workbench looks like and the project on it. Send us a picture or two along with a short description of what you are working on so we can share it here. If it's a project under construction, send it in. Repair job, send it in. Completed project, send it in. Send your pictures and descriptions to [daniel@modelrailroadresource.com](mailto:daniel@modelrailroadresource.com)

Ken Zieska writes: Here is what I am taking off my workbench.

The SOO Line hopper is American Models and I decorated it with a set of OddBall decals I bought years ago. OddBall is no longer in business, and I don't know of anyone else who produces a decal set like this. The paint scheme is from the 70's and it makes a nice looking car.



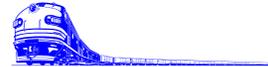
Next is a Great Northern Wood Sheathed 10' IH ARA boxcar built from a Standard Railway Casting Company kit. The kit uses the basic components of a Pacific Railshop Kit, but adds new sides and many other parts to make a prototypically accurate model. The kit builds nicely, a bit more difficult than the S Scale America X-29 kit offered by Des Plaines Hobbies, similar to the complexity of a Smoky Mountain kit. I began this kit many years ago, got sidelined and it languished in a desk drawer until this spring when I found it and was determined to finish it. While looking for kit instructions, I found out that this kit, and others, are still available. Go to [srcc.redmansefarm.com](http://srcc.redmansefarm.com) to see the website for the manufacturer. His boxcars are all postwar (WW II); so for many of us, these cars are exactly what we need to accurately fill out our rosters.



# S SCALE SHOWS & MEETS

The *S Scale Resource Magazine* will now be providing a free listing of upcoming events. This small, text only listing will include the Event, Date, Location, Type of Event, and Contact Information. [Click here](#) to go to the sign up form. This form will take your information, and we will publish it in our next issue. If it is an annual event, you will need to submit your information

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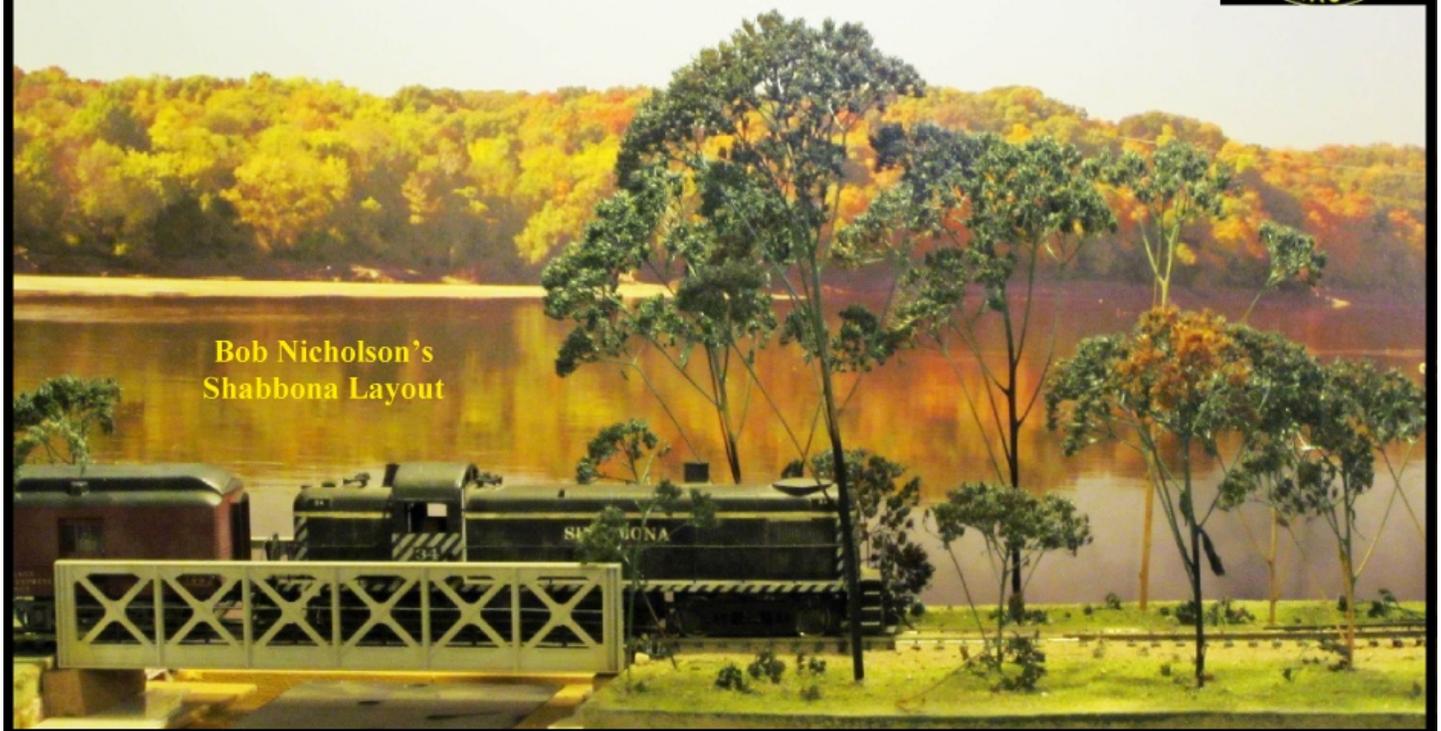
Fall S Fest  
November 4 to November 6, 2016  
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32nd Sn3 Symposium  
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