

THE

S

# RESOURCE

NEWS, REVIEWS, INFORMATION TO USE

*February/March 2022*

*Volume 8 No. 3*

SCALE



**The Hole Thing  
Drawing for 3D Models  
A New Decoder for an Old Engine - Update  
How I Use the TruGage Coupler Height Gauge  
New Tracks - Mentoring Is a Great Way to Learn  
Shows, Meets and So Much More**

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**February/March 2022**  
Volume 8 No. 3

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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

*An oldie but a goodie...*

*A look back at John Albee's layout. John has moved locations a bit since this was featured in our [very first issue](#) and is now building a new layout. We'll catch up with John in a future issue.*



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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

It's cold around these here parts... First some bad news, we have decided to pull the plug on the O & S Scale Midwest Show. [You can read our press release here.](#) That pretty much sums up the issues. There may be others who want to revive the show in some other form, so stay tuned.

And now we call for help. We are at the bottom on the proverbial barrel of articles. We'll be putting out the plea via Email and group postings, but the point is we need articles on anything to do with scale S. We know there are great modelers out there. We see them on Facebook and the other groups. Please get in touch with us at [daniel@modelrailroadresource.com](mailto:daniel@modelrailroadresource.com) and we'll help you get started. S scale needs a scale magazine as more people come in from the smaller scales.



Working with Jim Kellow and his New Tracks Modeling crew, we are sponsoring the “My Build” segments of the New Tracks video series. My Build is your opportunity to show your model, the prototype that inspires your work, the process, tools and techniques you use, and/or it's an opportunity to get feedback and questions answered. Click the image on the left to see our [promo video](#).

We normally don't publish articles that also appeared in The O Scale Resource Magazine. but we felt this was worth doing as not everyone reads both magazines. It's the first of our 3D printing articles. Glenn Guerra starts us off with “Drawing for 3D Models: The Issues and Considerations You Need to Watch Out For”. He brings up a number of salient points that many miss or don't fully understand. I have heard many in the past simply say, “you're in CAD just scale up/scale down the drawing and call it a day”. Oh, if everything were that easy! Anyway, enjoy the article, and next time we'll get into the wild and wonderful world of stereolithography (SLA) printing.



*First test printing using a new resin*

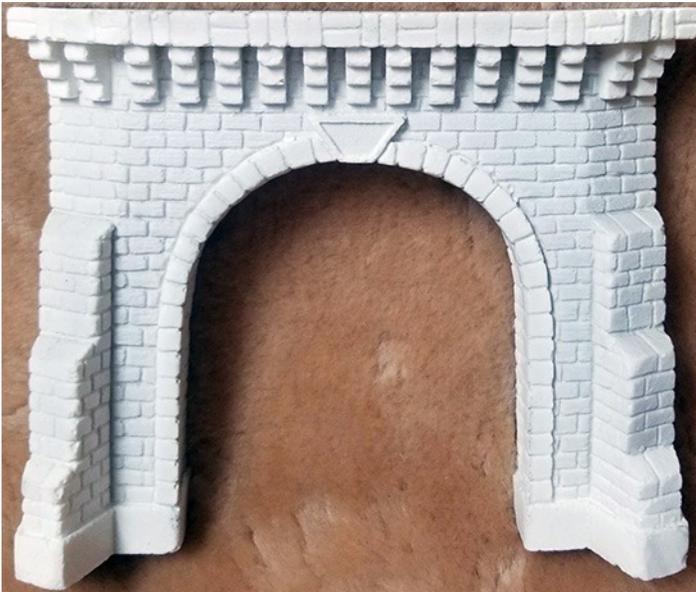
Happy Reading & Happy Modeling,

*Amy & Dan Dawdy*

# NEWS YOU CAN USE



New from [Pre-Size Model Specialties](#). By request, we now have a reproduction of the old Cliff Line S-scale tunnel portal available in our high quality resin. Reproduced with permission by [Clover House](#) who now owns the Cliff Line product line.

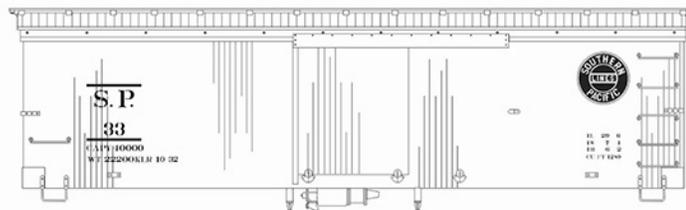
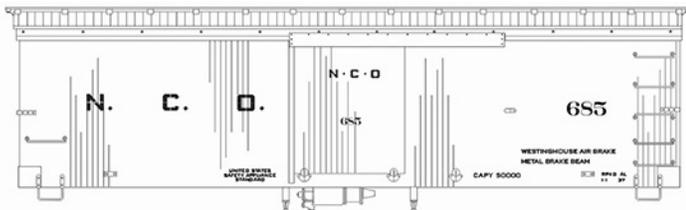


Overall: 7" wide x 5-3/4" tall. Opening: 3-3/4" wide x 4-1/4" tall.

[See their Website for more details.](#)



[Leadville Designs](#) announces the availability of this Sn3 box car kit.

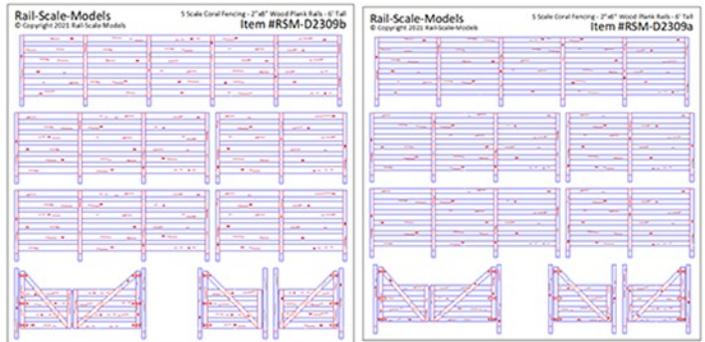


The kit comes with decals for both Southern Pacific and Nevada California Oregon railroads. Each kit includes lettering for both the SP and NCO. Kits comprise the finest laser cut woods, injected and printed details, exclusive etched brass hardware, wire lettering etc. resplendent with full interior detail.

[See their Website for more details.](#)



[Rail Scale Models](#) now has corral type fencing available.



Fencing represents 6' high corral fencing, but may be trimmed shorter for lower height. Laser-etched with wood grain details such as knot holes and cracks. Option for 0.026" RC Board or 1/32" Plywood. 2"x6" Planks, 2"x8" Planks and 2"

Pipe Rails are available.

[See their Website for all the details.](#)



[Sierra West Scale Models](#) has been producing O and HO scale parts and kits for many years, but they have recently started offering S-scale scenery items.

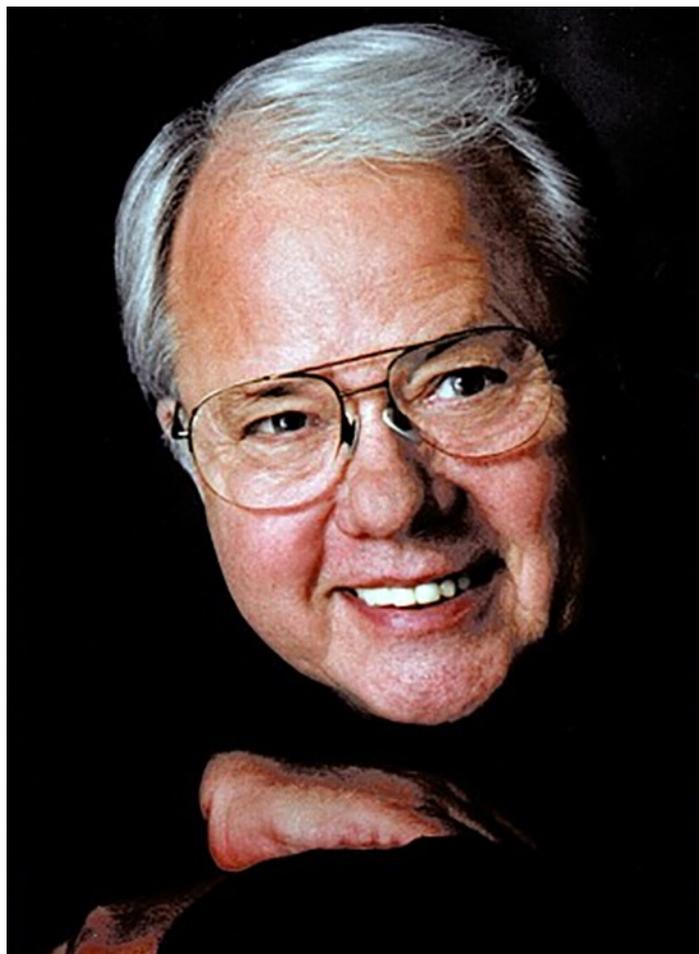
Detailing parts are sold unpainted and unweathered. All items listed for sale on this page are in stock and ready to ship within 2-3 business days.

All items are in very limited quantities and once sold out, the "buy now" button will indicate "out of stock". Items on this page will be restocked as time permits. Castings pictured are painted and weathered, yours will ship unpainted and unweathered.

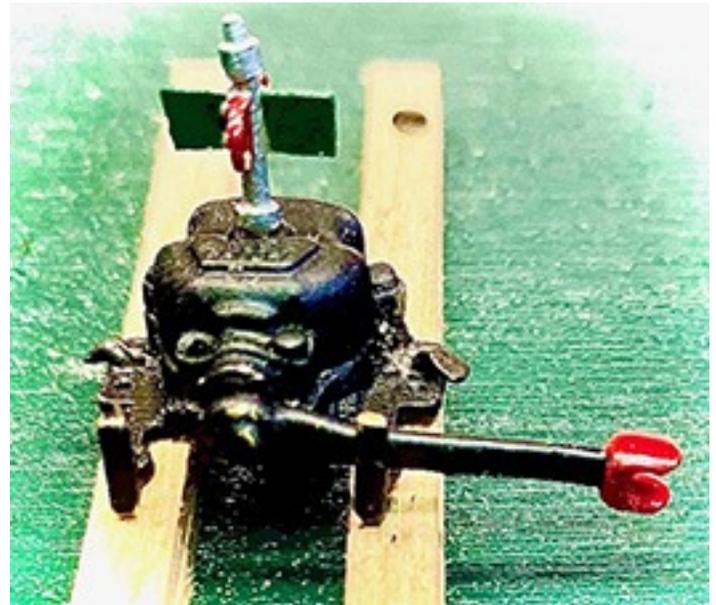
[Click here to see all the new S scale parts available.](#)



We are sorry to have to pass the word that Stan Cedarleaf died on December 30, 2021 at age 79.



Among his many interests, Stan was very active in the local, national, and international Model Railroading community. He entertained children and adults with his model railroad layouts and was renowned for creating custom decals for the hobbyists. Please see the New Tracks column in this issue for more on Stan.



[All Aboard Trains](#) has released their New Century Brass switch stand with day target in S scale.

They say “With a unique proprietary internal drive system, this little jewel surprises even us at the way it functions. Held together with 4 tiny brass nuts and bolts, it is a first in so many ways.”

[Check out their Website for more details.](#)



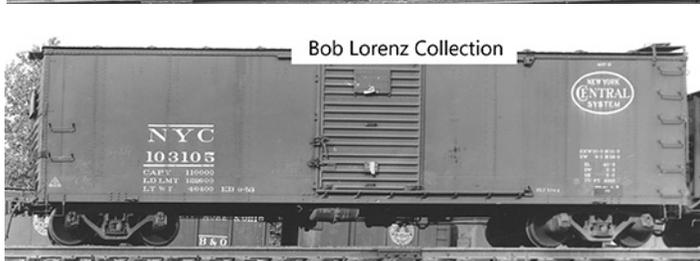
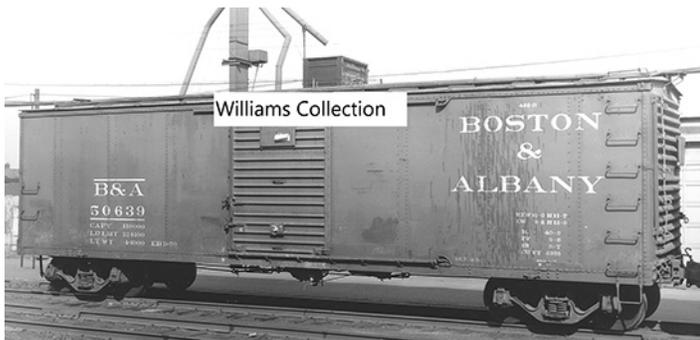
Jim Kindraka sent us a note: Last year I worked with Simon Parent to make 3D kits of the USRA-Design All-Steel 8' 6" boxcar. The kits rolled out in September, but decals have taken longer to develop. That has now been remedied! Decal sets covering

NYC System Oval - 1935 all-serif version S - 1:64 Out of stock	P&E Spec 486 Boxcar Decal - Peoria & Eastern - S-scale 1:64 \$4.75	B&A Spec 486 Boxcar Decal - Boston & Albany - S-scale 1:64 \$4.75	NYC (alt) Spec 486 Boxcar Decal - System Oval (filled) S - 1:64 \$4.75



several Lot Numbers for New York Central, Boston & Albany, and Peoria & Eastern are now available for sale on [Richard Brennan's TT-West website.](#)

The decals will letter cars exactly as shown in the three attached prototype photos. They are accurate for numbers, capacity and dimensional data; including, where used, the appropriate paint 'triangles'.



The boxcar kits are still available directly from Simon, they are correct for NYC, several subsidiary roads, Reading (#'s 100000-100999) and Northampton & Bath. Contact him at: [miniatures.from.the.north@gmail.com](mailto:miniatures.from.the.north@gmail.com)

**Tru-Color Paint** continues to bring new colors to their fantastic line up. Here's the new product information for the 3D Printed & cast resin paints and aerosols for December 2021/January, 2022

**February, 2022**

- 3D-Printed & Cast Resin
- 9299- Kansas City Southern- Southern Belle; Red
- 9300- Kansas City Southern- Southern Belle; Yellow

**Aerosols**

- 4041- Gloss Medium Green
- 4042- Gloss Dark Green
- Flat/Brushable
- 888- Flat Rich Oxide Brown

**March, 2022**

- 3D-Printed & Cast Resin
- 9360- Metra Commuter North- Blue

The S Scale Resource February/March 2022

**Aerosols**

- 4043- Gloss Bright Yellow
- 4044- Gloss Fire Engine Red

As always, **Tru-Color Paint** is open to new ideas for paints. March will end all of the 3D Printed & Cast Resin paints we have scheduled, and April ends all of the aerosols so scheduled. If you or your readers have any suggestions for new colors, email us at [tru.colorpaint1@yahoo.com](mailto:tru.colorpaint1@yahoo.com) or [tcpmodelpaint@gmail.com](mailto:tcpmodelpaint@gmail.com).

If we can find enough information on the color, we could put it in the next year's product schedule.

See their full line up at their Website!

**All back issues are on-line and free to read**

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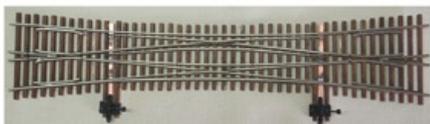
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Tru-Color Paint is a solvent-based paint that uses an acrylic polymer to bind our finely-ground pigments to the model being painted, allowing for flexibility in handling.

## ② Precise & Accurate

Tru-Color Paint is simply the most accurate model paint on the market. We use Federal Standard, RLM, and British-standard color-chip fan decks for all modern military colors. Color chips, museum sources, and written, archived research allows us to have the most accurate colors available.

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- TCP-9289 CSX- Yn3 Scheme, Blue
- TCP-9290 CSX- Yn3 Scheme, Yellow
- TCP-9299 Kansas City Southern- Southern Belle, Red
- TCP-9300 Kansas City Southern- Southern Belle, Yellow
- TCP-9360 Metra Commuter North- Blue
- TCP-9395 Clear Primer



*These sprayable paints are specifically designed to adhere to 3D printed and cast resin shells, parts, and models without priming, right-out of the bottle.*



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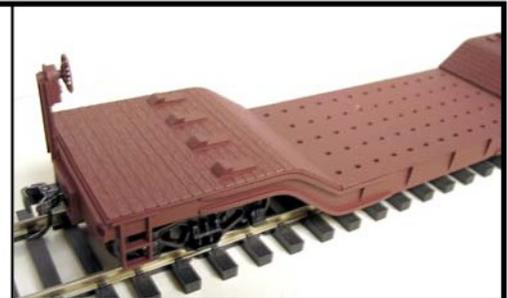
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# Drawing for 3D Models: The Issues and Considerations You Need to Watch Out For

*Editors note: Glenn's series on building his steam locomotives is on hold for the time being as he winters in Florida. He'll get back to it but for now he'll take a look at 3D drawing and some of the issues involved.*

**By Glenn Guerra**

At the end of the last installment in my steam locomotive series, I said we would talk about the tenders for my models. Since that time, I have been pulled away from my models and don't have anything to write about. However, I have received some nice comments from people about how they like the planning and thought that goes into making something. That is what we will talk about in this article.

I have been building and designing things most of my life and have learned some hard lessons. Dan has purchased a 3D stereo lithography machine, and I have been helping him with some design and drawing. He asked me to talk about some of that in this article, and that should be of interest to those of you who like the discussions about why I did things the way I did.

When designing a part, we need to consider a few things. One of those things is, what are we going to make this item out of? Things that will influence that choice are, do I have the tools or ability to make this item out of this material? Are there sizes of raw material that will work for what I want to do? Will my material choice be strong enough? Does my part fit into another assembly? Is that influencing my choice of material? There are lots of things to consider and it is easy to make things harder for ourselves.

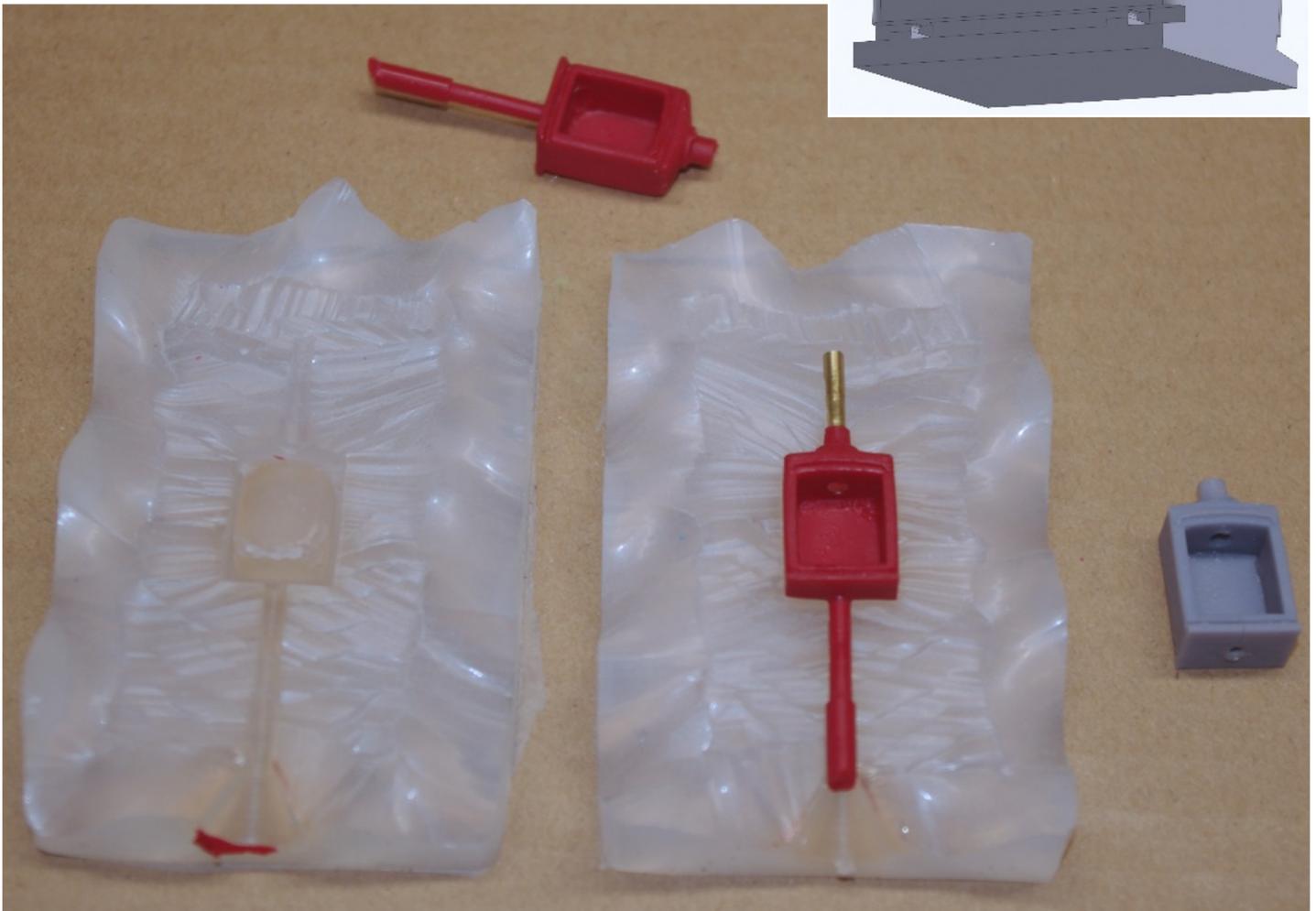
Another item I would like to spend some time on relates to computers and computer design. Now that Dan has a 3D machine, he is getting into this and is starting to see what I have been talking about. More than one person has told me about the virtues of scaling drawings and how easy it is. As you have heard me say, always draw your model in the scale you will build it in. When you scale a drawing, you will get into parts that are too small or thin to manufacture, or parts that will not fit in the assembly they should. Before you write me, there are cases where a full size drawing does work. I was talking with Bill Wade from BTS Models one time about this. He does draw all his buildings full size to start with and then scales them. Bill does acknowledge that the scaled drawings do need work for all the reasons I will get into. Essentially what Bill is doing is creating the prototype drawings. Then, as we do, he scales them and makes the correction, basically making a new drawing for each scale. This makes sense in his situation as a manufacturer, but remember he is still making working drawings in the scale he will make the building in. This is just like us making scale drawings from prototype drawings.

Now that you are wondering where this is all going, let's go through some examples of things I have done and I will show you some of these points. As always, these are things I do based on my knowledge, skill level, and resources. The common denominator here is, think your job through. Take into account your own knowledge, skill levels, and resources. There is always more than one way to do things, but some of the things I have done and why, may help you.



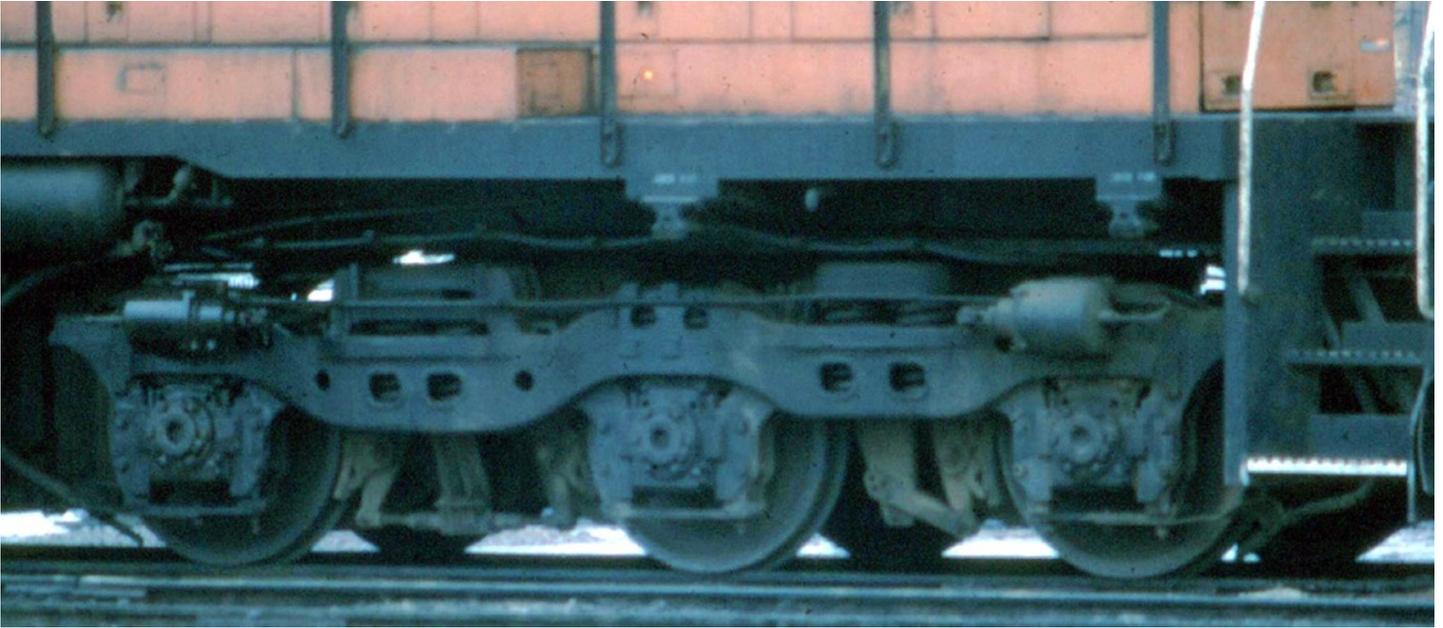
*This is the drawing for the signal cabinet. The door was done as a separate part so the cabinet would be hollow. A large part like this will develop hollow spots as the brass cools in the casting process. Uniform cross sections are always a good idea when doing castings.*

*Notice there is a hole for the mast tube to be inserted in the top of the cabinet. This hole could have been drilled, but it is not difficult to cast this hole in.*



*Here is the mold for the signal cabinet with a wax part in it. The brass pin was inserted into the pattern, which is the gray part on the right, when the part was molded in the rubber. To make a wax part, the pin is inserted in the mold and the two halves of the mold are put together. The wax is injected and cools. The part with the pin is removed from the mold and the brass pin is removed from the wax. It will take a little bit of clean up on the brass case after it is cast, but that will be easier than drilling the hole and keeping it centered or square.*

## SDL 39 Trucks



*I am working with Lou Houlemard at Central Locomotive Works on some truck designs. He has orders for O Scale EMD SDL 39 locomotives and needs this truck. We are going to make these in brass by the lost wax process. From our drawings, we will have 3D Stereo Lithography parts made that will become our patterns. Some of the other considerations are: all axles will be powered, the bolster must be sprung, the journal boxes must be sprung, and lastly, the truck must stay with the locomotive when it is picked up.*

*I drew these parts in Solidworks because I have that. Other drawing programs will work if you have them. The beauty of the computer drawing is you can see how all the parts will fit together. If you want to go this direction with your modeling, you need to develop drafting skills with the computer. Take some classes at a local tech college which is what I did when I started the 3D work ten years ago. Your program must be able to produce a 3D image that can be turned into an STL file. All the 3D printing systems need an STL file format for input.*

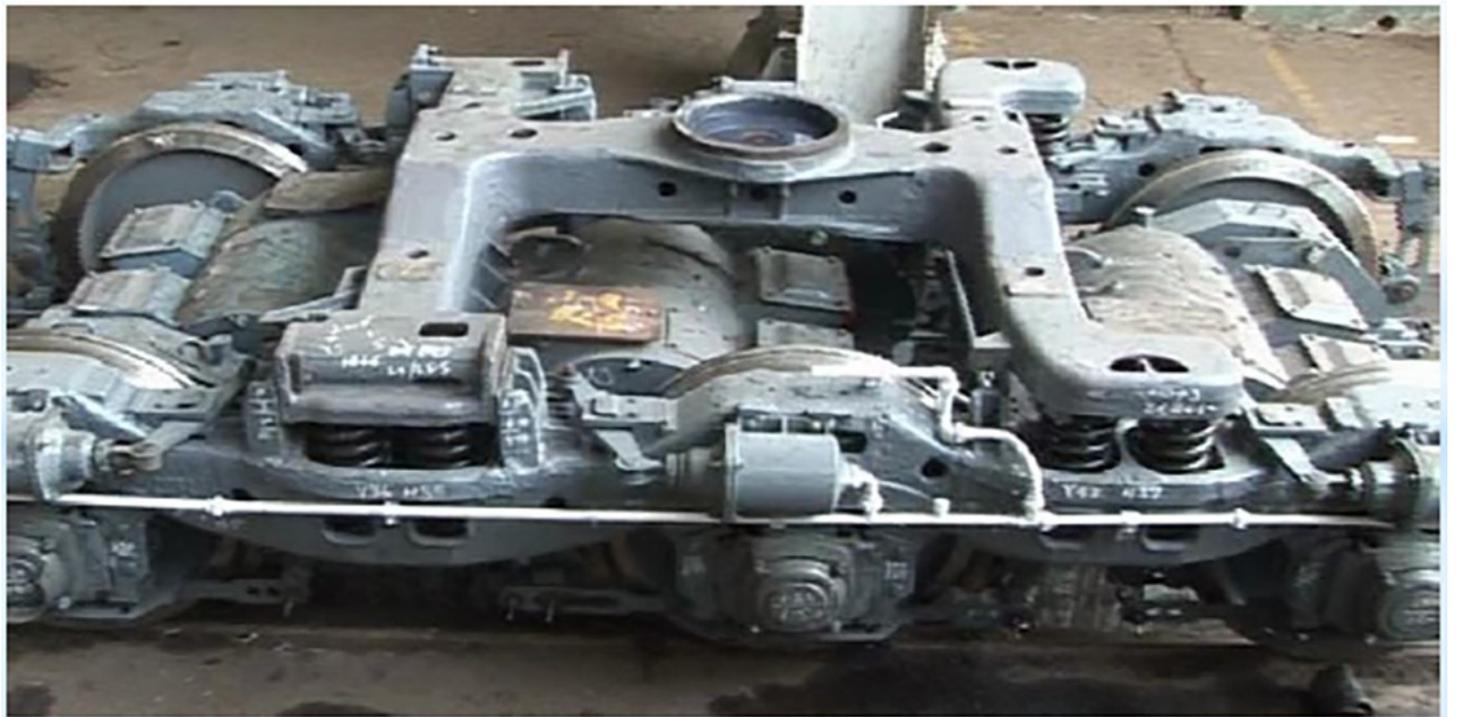
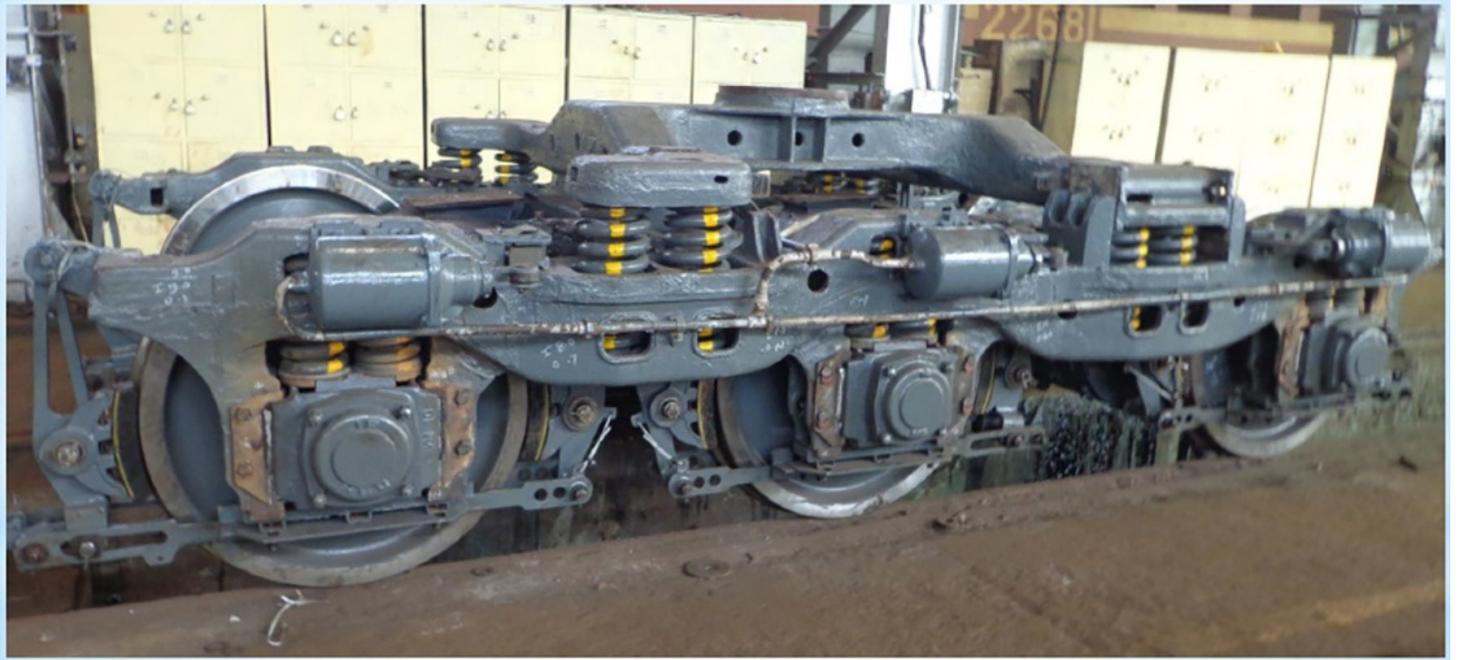
*By having the center axle powered, we need to have clearance under the bolster for the gear box. When designing like this, draw the other components you plan to use even if you will be buying them. They will become models that can be inserted into you designs to check fits.*

*We want the bolster to be sprung and this presented some problems. One of the problems was how to cast the well where the springs are in the side frames.*

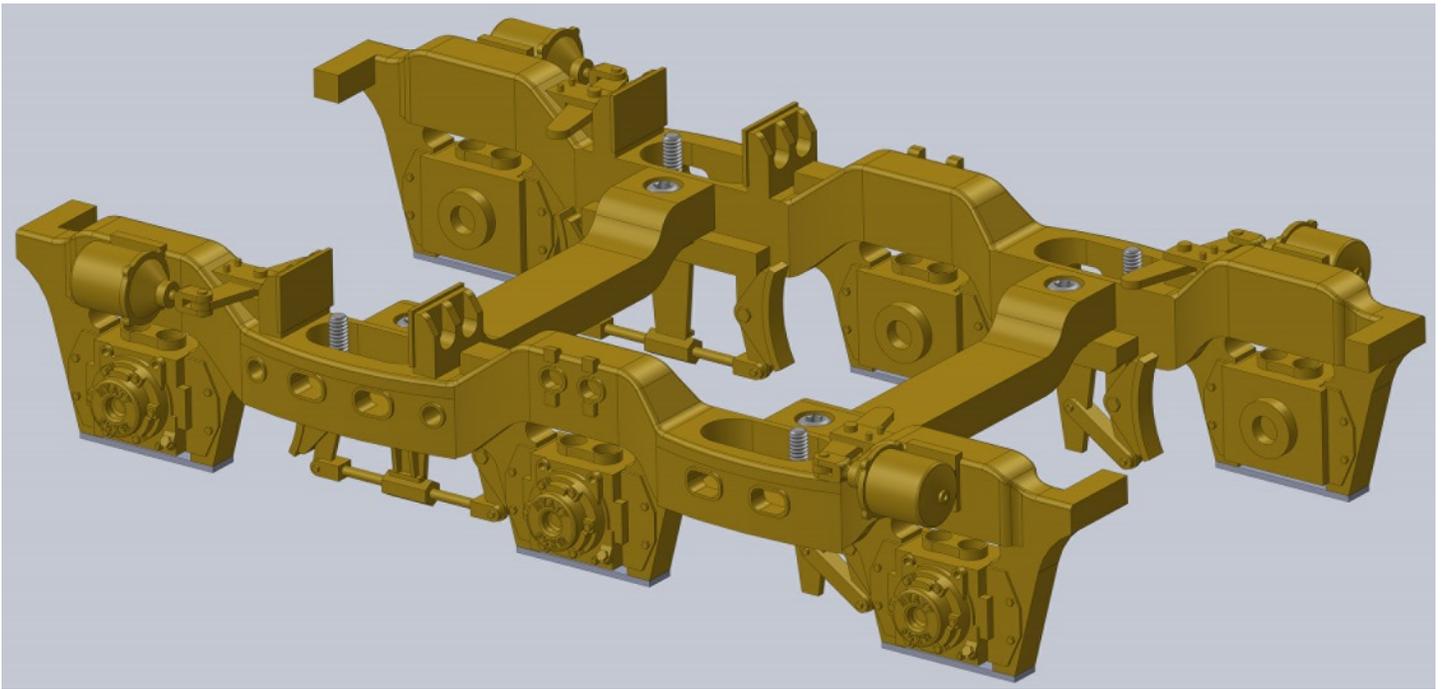
*Springing the journal boxes was easy, but it took a second try to get it right. More on that later.*

*On the prototype, the bolster is held in place by gravity and the locomotives are not meant to be lifted up like model locomotives. I would need to find a way to keep the bolster and truck together and not have that mechanism show on the finished model.*

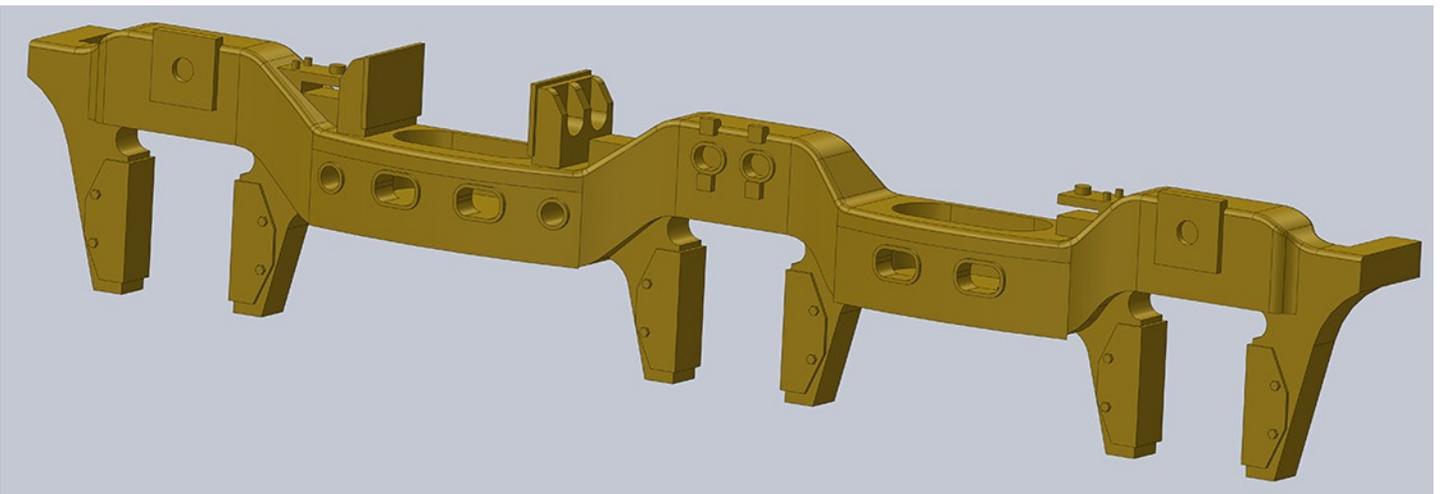
*These are some of the considerations you need to make prior to getting patterns made. If you draw the truck up full size like the prototype, you will have all kinds of fit problems when you shrink the drawing down and try to insert a drive mechanism in it. Much better to start in the scale and size you will build in.*



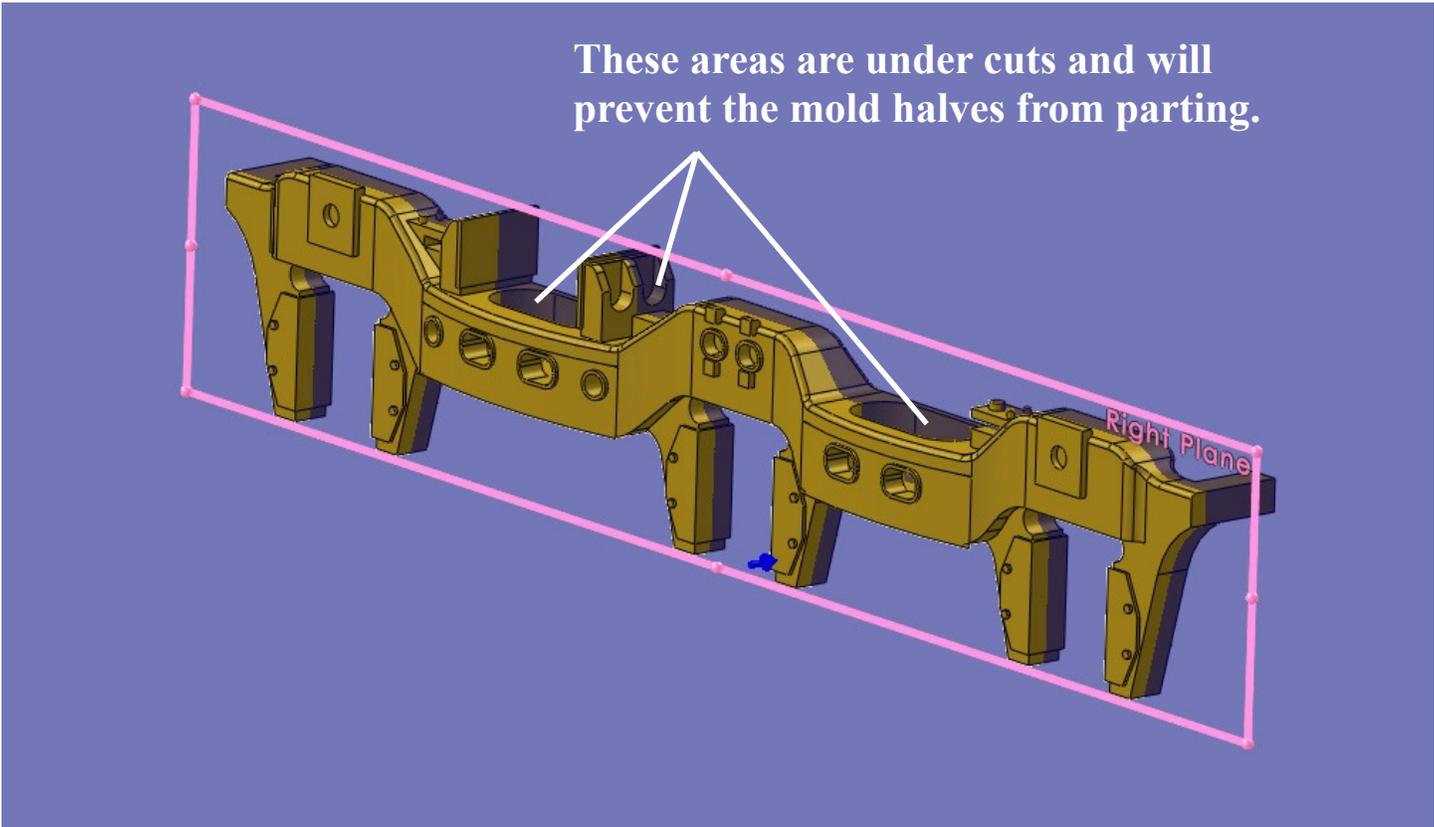
*These two photos came out of a report someone did about the different trucks used in India on the railroads there. This is the same flexicoil truck used on the SDL 39 locomotive built for the Milwaukee Road here. One of the minor changes is the addition of the center brake cylinder. Go back and look at the photo on the previous page of the Milwaukee Road truck. The mounting pads for the center brake cylinder are there, but the Milwaukee used only one brake shoe per wheel, and in India, they had clasp brakes with two brake shoes per wheel. These trucks have the side frames and transoms all cast as one piece. You can't see the transoms in these photos because they are hidden by the bolster. Notice that the bolster just floats on the springs.*



*For this model, we needed to be able to get the side frames apart to install the gear boxes and drive. This is done by having the transoms screwed into place as shown here. Look in the spring wells and you will see some screws sticking up. These screws come up from a recessed hole in the side frame and screw into the bolster. This holds the bolster to the truck so the model can be lifted up and they do not show on the finished model.*



*This is the final version of the side frame. On the first version, I tried to cast the holes for the journal springs with the side frame. This did not work well. One problem was separating the mold halves which we will talk about more. Another issue was the holes would trap air in the investment part of the process and we would get some holes that were filled and needed to be drilled out. After thinking about this, we decided to not cast the holes in, but drill them out later. This also gave us more control of the hole depth, and as a result, more control of the ride height of the model.*



These areas are under cuts and will prevent the mold halves from parting.

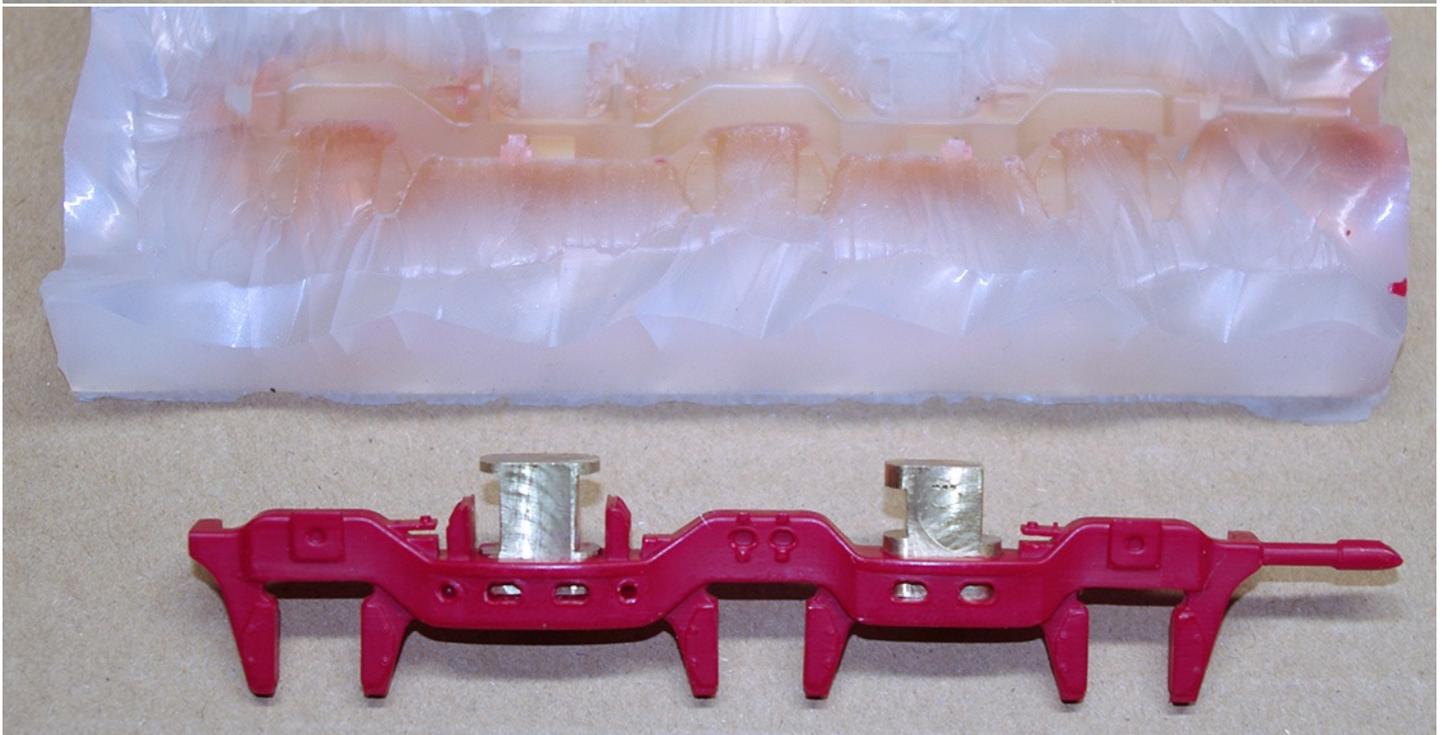
*This drawing shows the parting line of the mold we will make for shooting the wax into. The brass color is one half of the mold and the purple color part is the other half of the mold. The problem areas are the spring wells and the two thrust pads. These areas are under cuts and will prevent the mold halves from coming apart. The spring wells are taken care of by using an insert like I did on the signal cabinet. On the thrust pad, the rubber is flexible enough that you can gently pull it away. These issues need to be considered in the design phase of your project. How you decide to deal with these issues will affect your final design. You could leave the spring wells solid and drill them out later, but that would be a tricky process and especially if you need to do 96 side frames. If you split the mold up and down that would make a very deep mold that would be hard to get the parts out of. You would also lose the detail of the holes in the side frame for inspection. They would become the under cuts.*



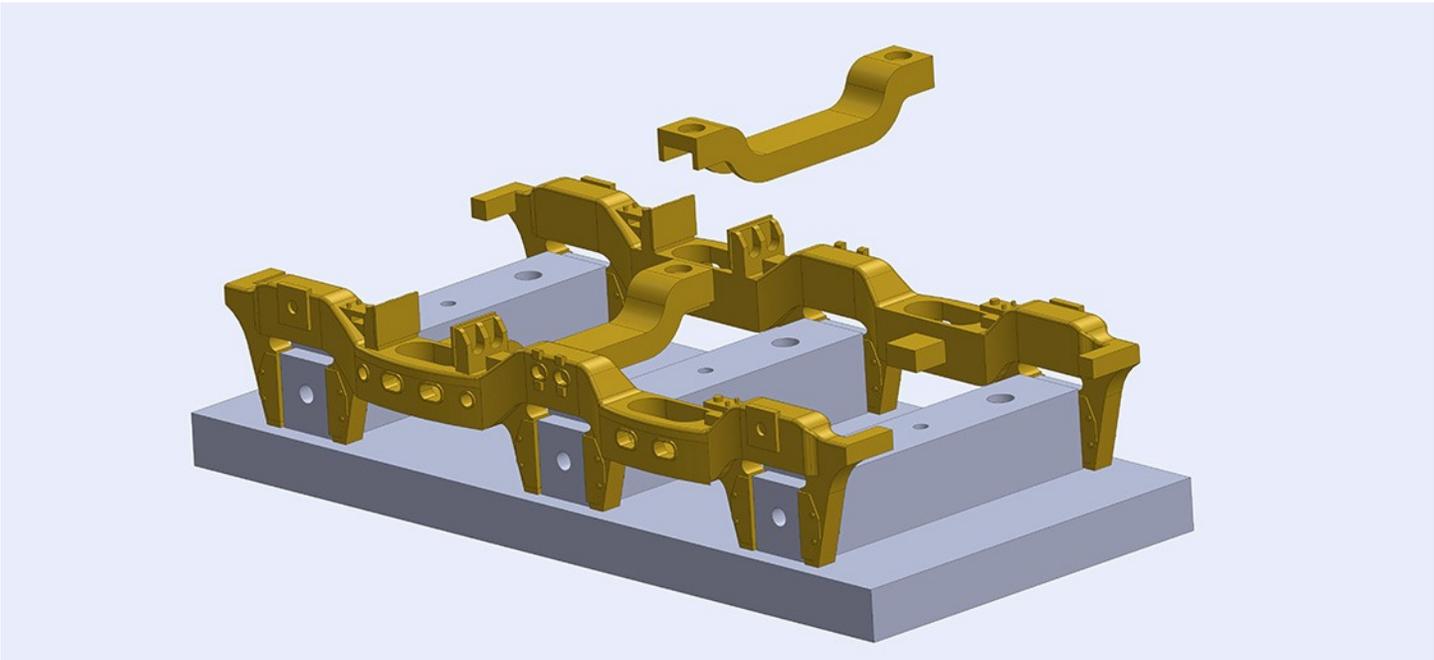
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- Email:** amy@oscaleresource.com  
daniel@oscaleresource.com
- Mail:** The Model Railroad Resource LLC  
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Dwight, IL 60420

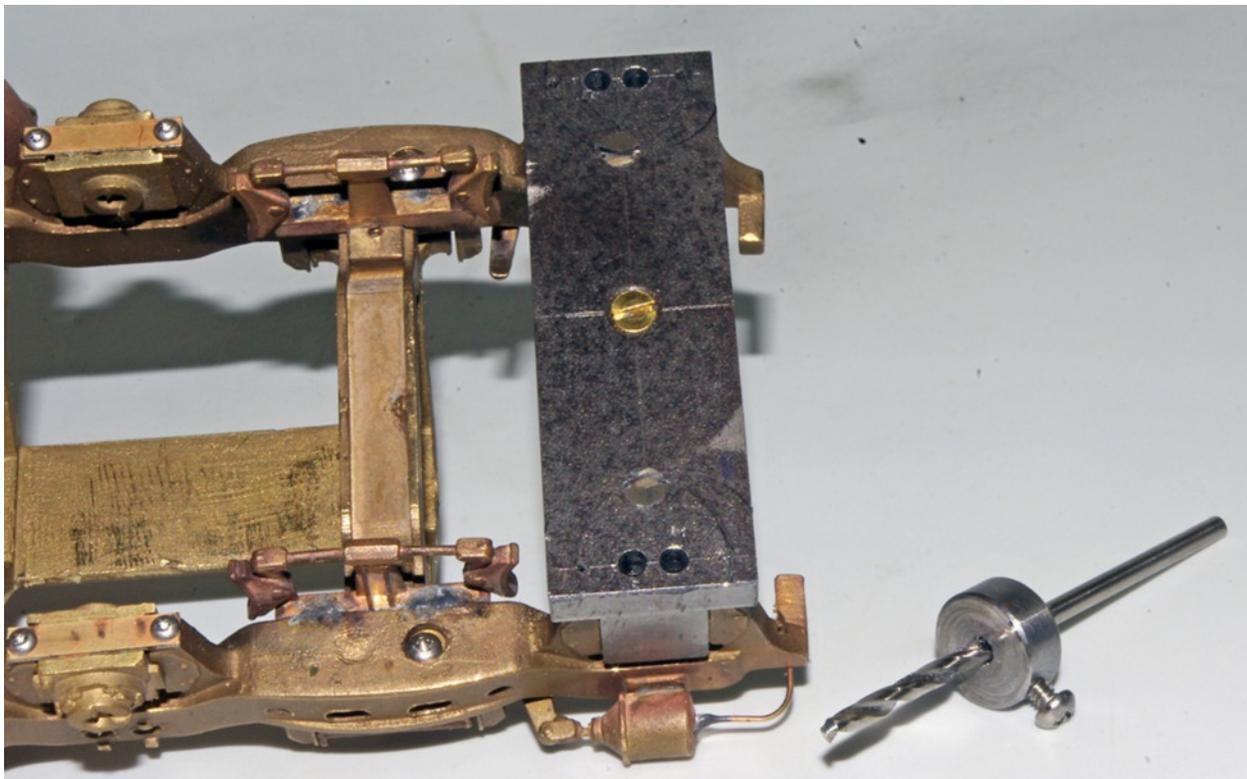
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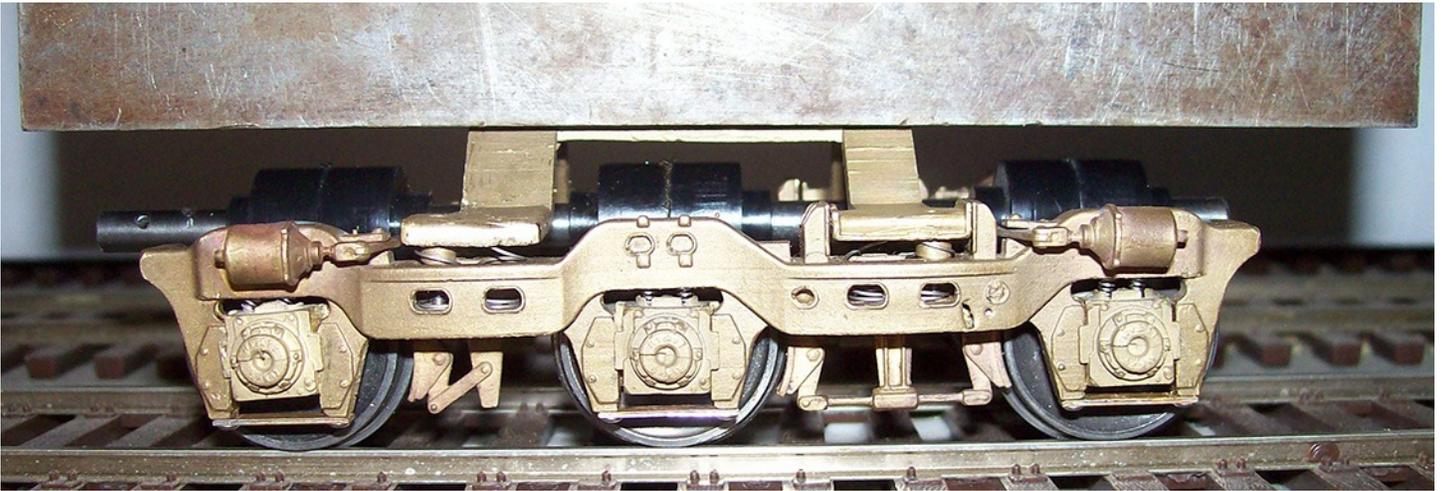
*The top photo shows the two mold halves with the brass inserts. To make this mold, make the inserts fit the pattern and have them in the pattern when you make the rubber mold. In this case, I made the brass parts after the side frame pattern was done. Make sure your inserts are keyed so you know where they go in the mold. Another consideration is to captivate the insert so it will not move when the wax is injected.*



*When you are making an assembly out of parts, you need to make sure the final assembly is square and that the components are easy to assemble. In the case of these trucks, the side frames are what we will see and we made the least amount of compromise on them. The transoms are to hold the side frames in alignment and are not visible on the finished model. This is an area where function will take precedence over prototype fidelity. The side frames are inserted in the fixture and then the transoms are fitted. They are drilled and the holes tapped for the mounting screws. The truck frames can now come apart to insert the drive components. It is much easier to think this all through on the computer rather than trying to make random parts fit together.*



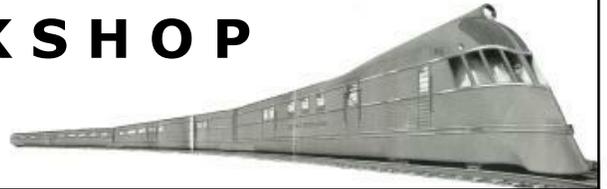
*For this fixture, we will drill the spring holes in the side frames and the holes for the pedestal binders. It was simple to make and is easy to change the depth of the spring holes. Look close and you will see the screws in the bottom of the side frame that hold the bolster to the truck.*



*The spring design was calculated for a locomotive weight of 6 lbs. Here Lou has tested one of the trucks with a weight that the truck will carry. The journal boxes were touching the pedestal binders with no weight on the truck. The journal springs have compressed this much and the journals will float like the prototype. The trucks were designed to use commercial components and not special springs. Take these factors into your design also. Here we have a truck that looks a lot like the prototype and functions like the prototype. The truck uses a commercial drive and off the shelf springs.*

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# ***Tsunami 2 ?***

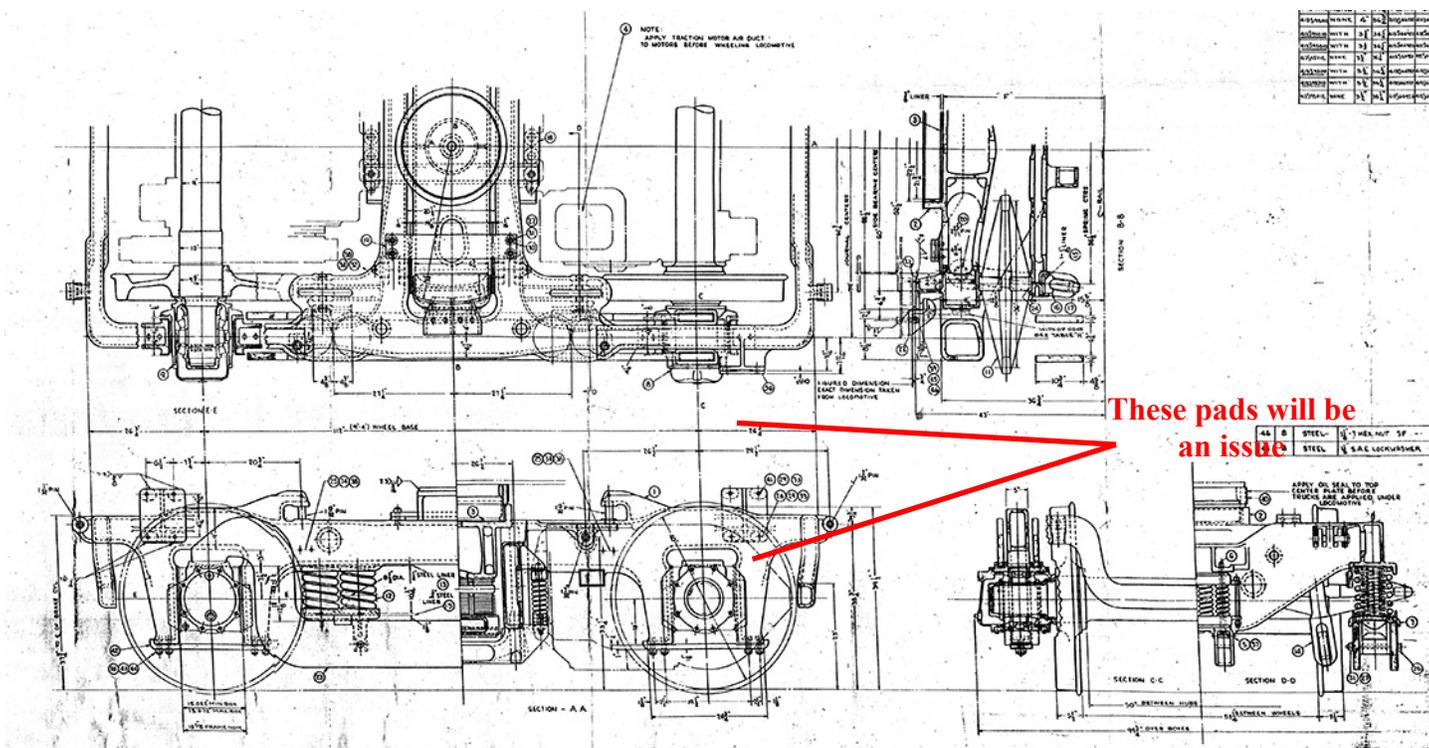
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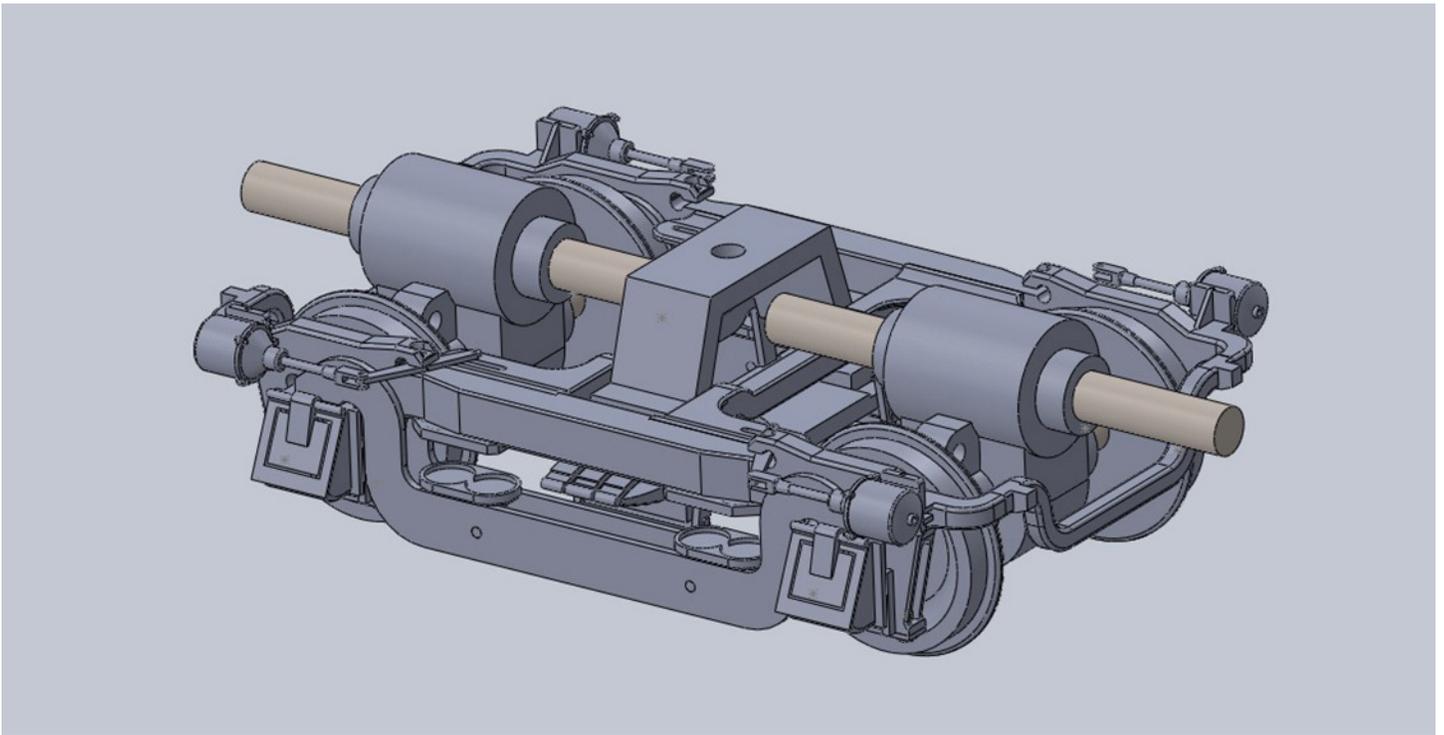
# AAR Type B Truck



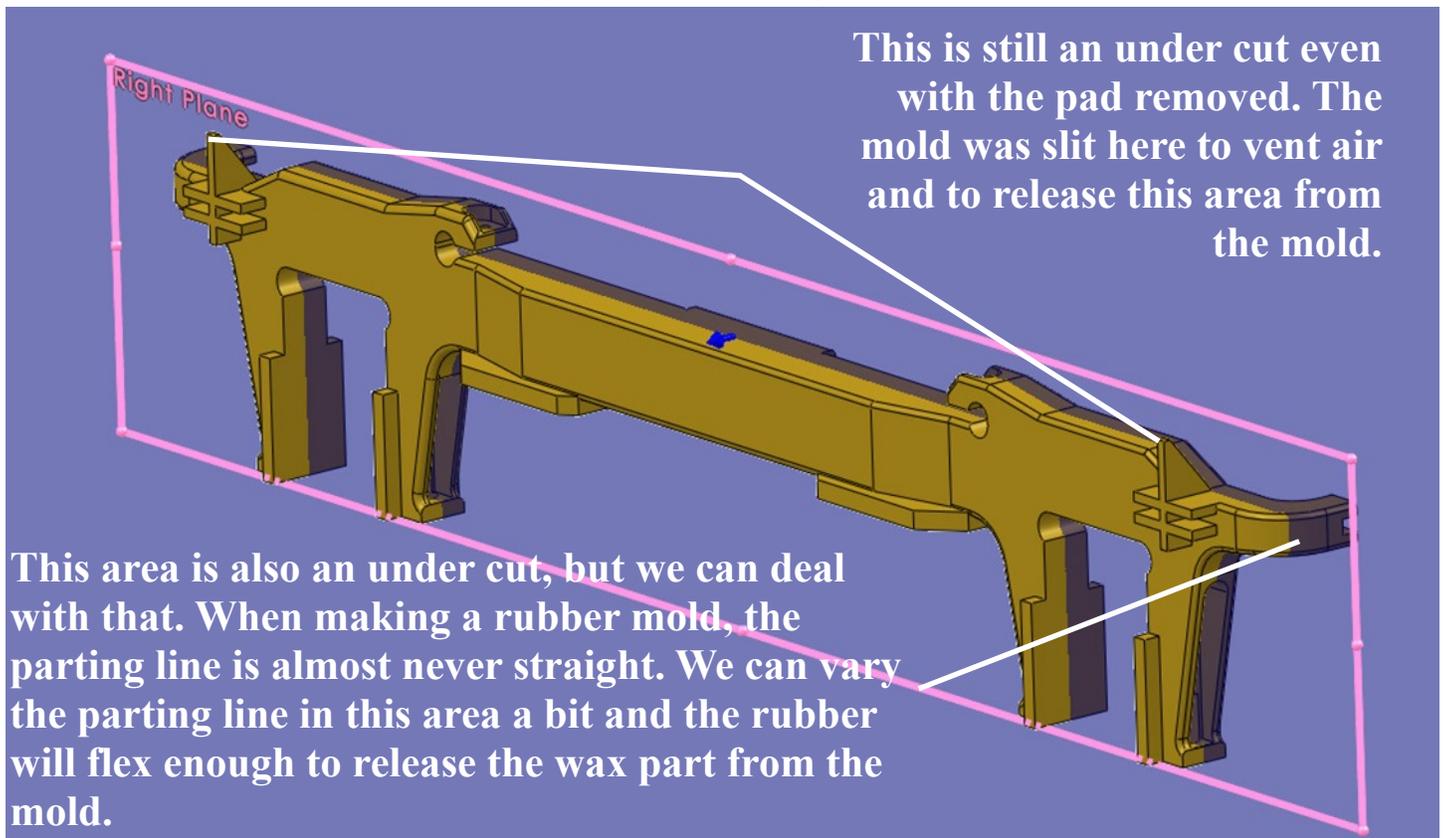
The next truck Central Locomotive works has coming is this AAR Type B truck



For this truck, we were fortunate to have some good drawings. Notice the pads where the brake cylinders mount. These pads will be an issue we need to deal with. The prototype truck frame was cast in one piece. When they do this, the mold is made of many small parts. After the molten metal is poured into the sand mold and cools, the sand mold is broken away. For our model, we will need to cast the side frames, transoms, and end beams separate and assemble them later. An investment casting of the whole truck as one piece would cost more than the combined cost of the parts. We will cast the side frames as one piece using a rubber mold. The rubber will tolerate some under cutting but not a lot. This is where we will have trouble with the brake cylinder pads. I will show what we did in the next few photos.



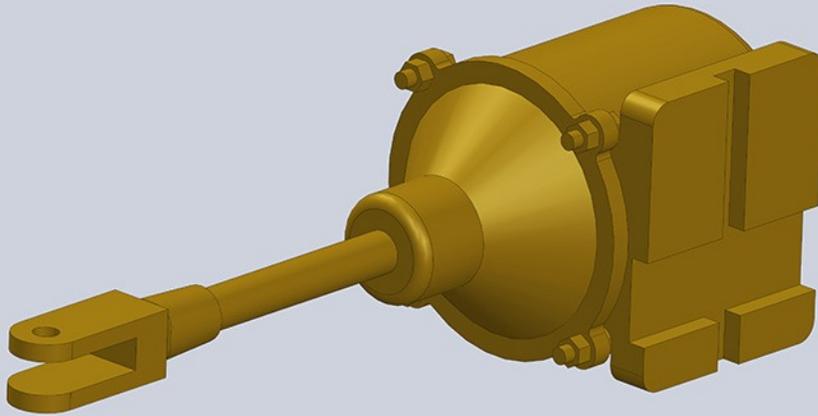
*This is the drawing of the truck as we will make it. Use the computer drawing to its full advantage, and make assemblies like this to check your clearances and fits.*



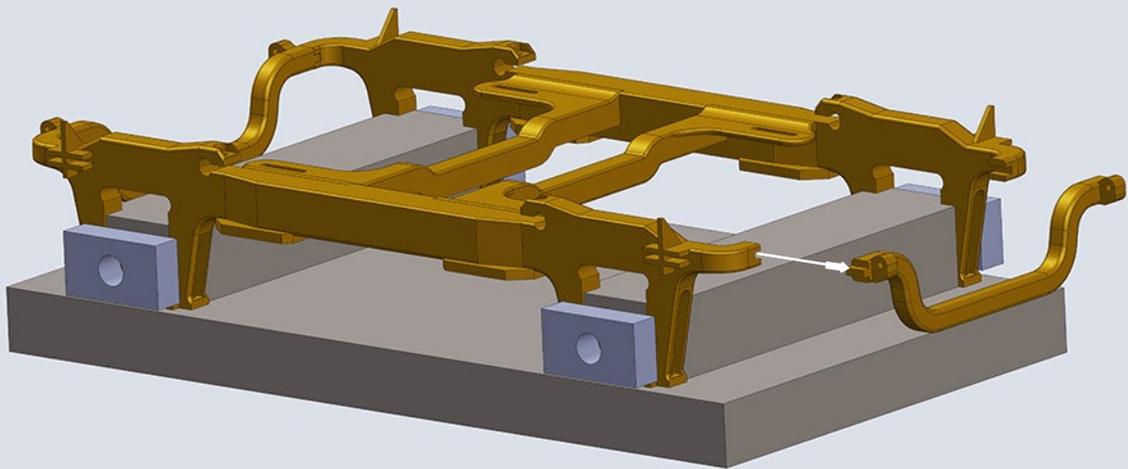
**This is still an under cut even with the pad removed. The mold was slit here to vent air and to release this area from the mold.**

**This area is also an under cut, but we can deal with that. When making a rubber mold, the parting line is almost never straight. We can vary the parting line in this area a bit and the rubber will flex enough to release the wax part from the mold.**

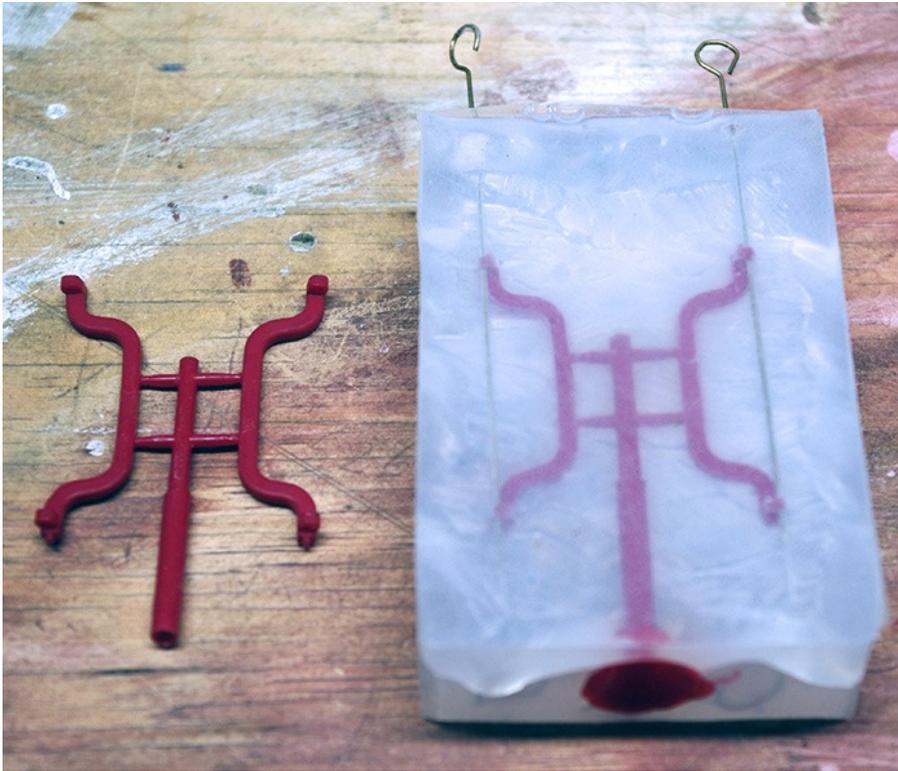
*Here is the side frame showing where the mold halves will be split. There are some issues and they are shown and explained on the photo. There are pockets for the springs, but they are shallow and the rubber will flex to release the wax from the mold. The other area that will be a concern are the hollow spots in the pedestal legs. These under cuts are not very deep and part of each hollow spot is in each side of the mold. The rubber mold again flexed enough to release these parts.*



*For the brake cylinder on the AAR truck, I put the pad that was on the side frame onto the brake cylinder. The notches on pad locate the cylinder on the side frame. This meant there is a left and right brake cylinder, but that was less worse than trying to cast the pads on the side frames.*

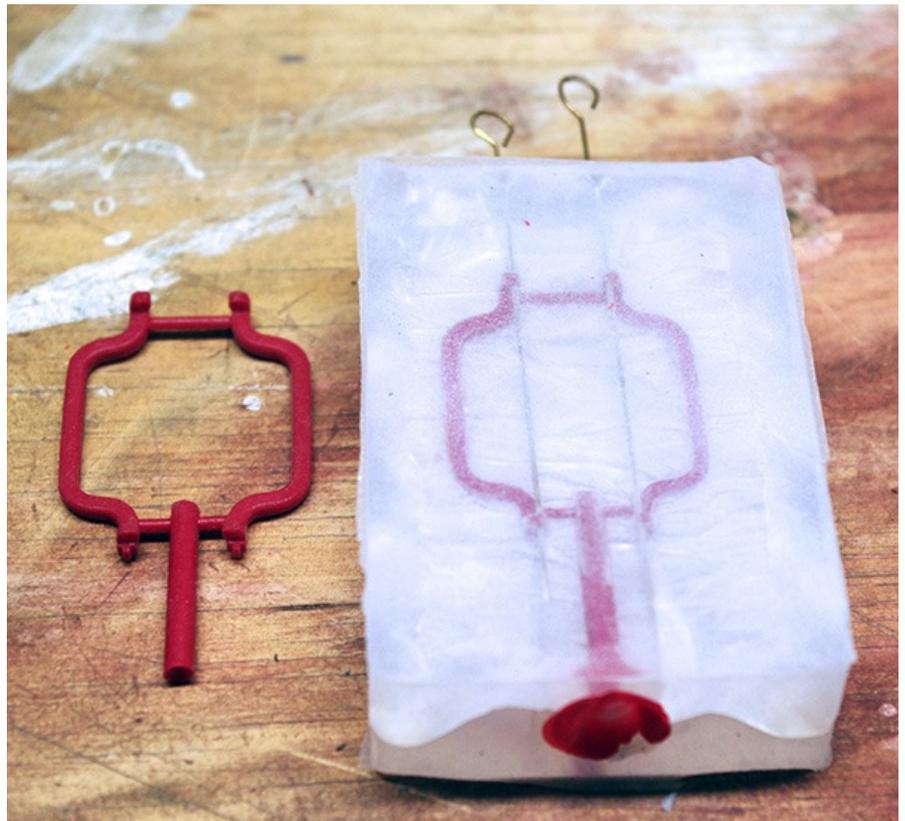


*For this truck, I made an assembly fixture also. Notice the end beam has a tab that fits into a slot in the side frame. In the past, I have tried mortise and tenon joints for these locations. They look good on the drawing, but don't work well in practice. During the casting process, air bubbles get trapped in the small mortises and that causes the mortise to be filled in with brass. They are hard to clean out. I tried holes and pins and that did not work for the same reason. I ended up drilling out the holes later. The other concern I had here was how would I get the end beam into the side frame? The side frames will be held tight in the fixture and will not spread. By making the slot and tab arrangement shown here, I can slide the end beam into the side frames and solder them. The tab and slot arrangement is also easier to clean out if there are issues with the casting. The transoms are also located in the side frames with a tab and slot arrangement. This whole assembly will get soldered in the fixture so it will stay in alignment.*

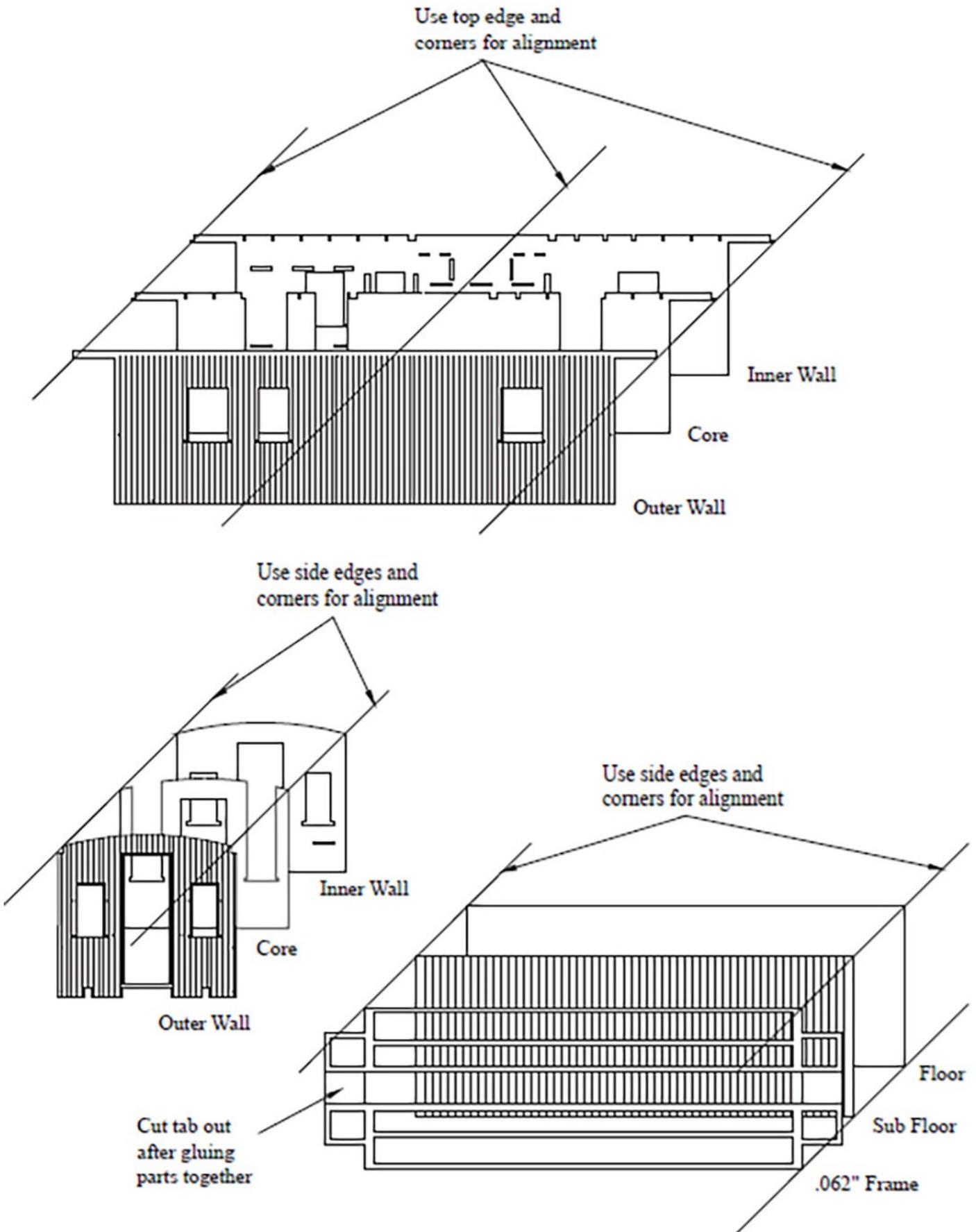


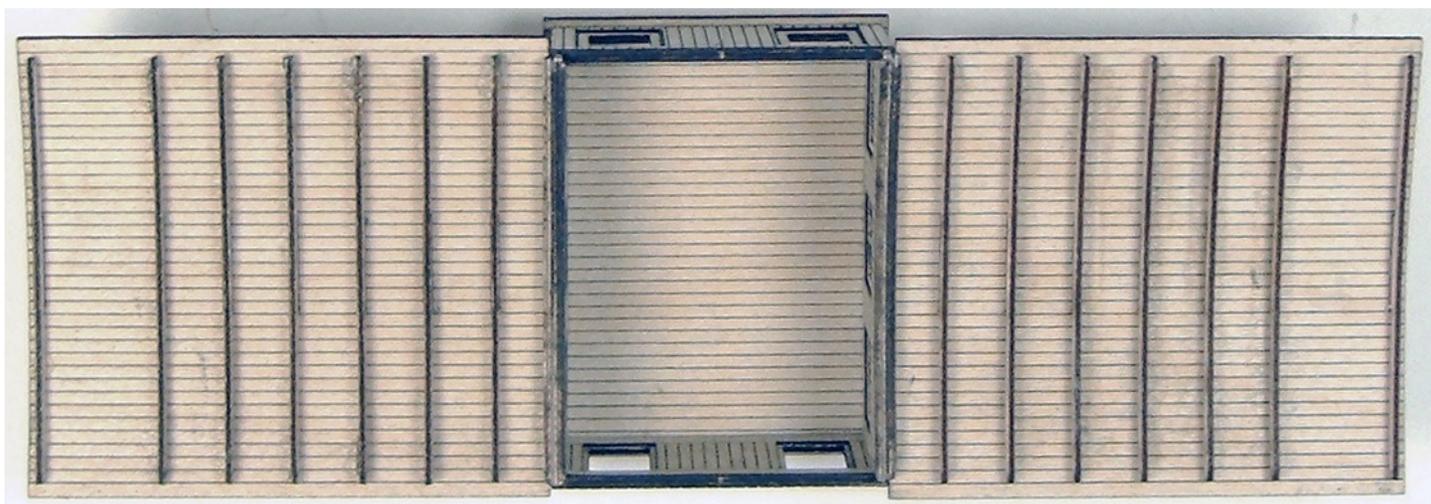
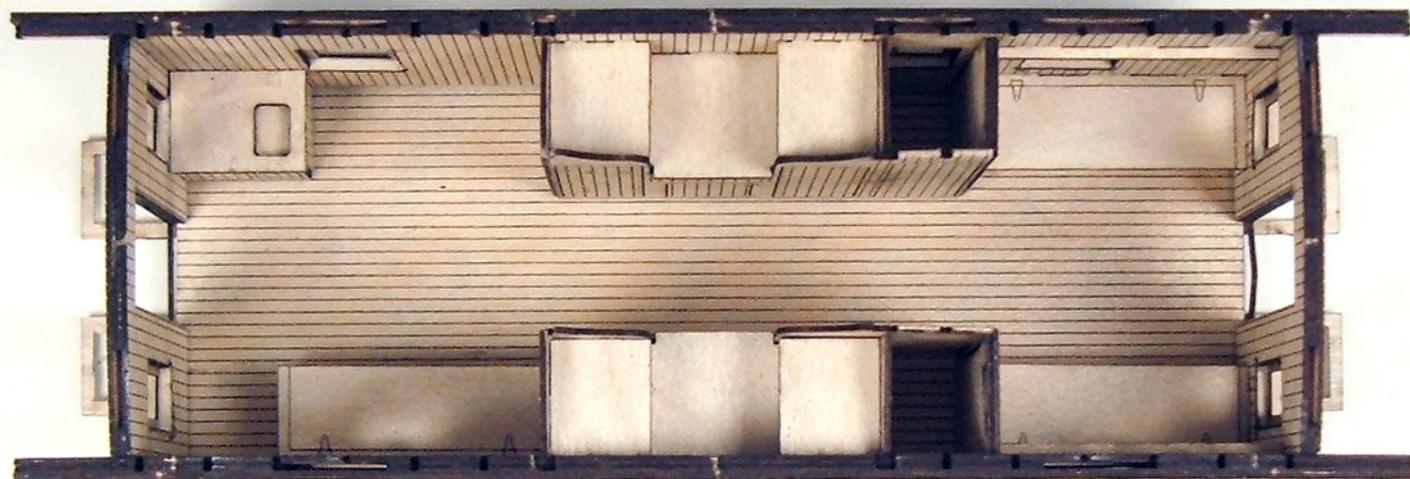
*During your design process, you need to consider the capabilities of other people you will be working with or who will be making things for you. The above is an example. These are the end beams for the up coming Central Locomotive Works AAR Type B truck. We made our rapid prototype patterns from my drawings. I mounted the patterns and made the mold on the left. I mounted the patterns on the sprue the way I did so it would be easy for us to clean up the area where the sprue was. This is the bottom of the part and not very visible on a model. In addition, it is an easy area to clean with a file. I sent the photo to the foundry to see what they thought, and they didn't like it. Their concern is the brass may not fill the bottoms of the end beam,s and they have a point. My mold vents there and the wax does not have a problem filling the bottom of the mold. When the wax is cast in the investment material, it may not vent as well as my mold.*

*The solution was for me to make a new mold, as shown to the right, and now there is better flow through the mold. This brings up another point I have talked about in the past. Industrial manufacturers are not like the big box retail stores and will not put up with a lot of whining. They will have no trouble telling you to look elsewhere to get your work done. If you want to give them orders for many thousands of parts they will bend a little, but for a few parts, consider yourself lucky that they are even talking to you. I think the parts on top would have worked, but I went and made the new mold on the right. It keeps the peace, and sometimes you need to do that.*



# Mullet River B&O Caboose





*This is one of my old Mullet River kits. Look at the drawing on the previous page for how the sides were laminated out of three pieces. I had people ask me if I could do these models in 1/32<sup>nd</sup> scale. I could, but it would take some time to redraw the art work for the laser machine. I was informed that all I needed to do was scale the drawing. Simple right? So lets 's go through the process.*

*This kit was designed to use 1/32" thick plywood. That also means all the tabs and slots are sized for 1/32" plywood. During the design process, I had cross sections of the car drawn and I was able to derive dimensions for the drawing and use them in other views. In other words, everything fit for 1/32" plywood. To scale the drawing, we take 1/32 and divide by 1/48 and we get 1/32 scale is 1.502 times bigger than 1/48 scale. On our cross section drawing, the .032" plywood is now .048 thick. This is correct and all the parts on the drawing will still fit. The problem is, where do you buy .048" thick plywood? Now I need to go back through all the drawings and adjust things back to using .032" plywood. Not just a simple mater of pushing the scale button. Remember material choices are driving part of your design.*

Those are my thoughts on the design process. I am a big believer in technology and use it a lot, but it is not a cure all. There are still things to be considered and thinking the whole process through is a good idea. Computers will only do what you tell them to do. If you say, make this part twice as big, the computer will do that. It will not check to see if you can get materials in the new size or if your part can be cast and so on. The computer does give you the ability to easily modify parts and check fits in assemblies. Now we have the ability to make what we can draw using rapid prototype technology. 3D printing is wonderful technology and able to do a lot for us, but there are limitations and issues. Dan will be getting into some of what he is finding out in his article.

*Dan here... next time we'll look at the art of 3D printing. Yes, it's an art, it's frustrating, it will make you happy and then the next time tear your heart out. All the fun of resin printing. While Glenn's drawings are superb in every way, unless you know how to set up the timing and supports within the slicing software, you will fail. We'll talk about the extra software you will need, as well as, the accessories you will be using and a few things that you can make yourself to keep costs down and so much more.*

*As a heads up, I bought the Elegoo Saturn MSLA 4K 8.9" Monochrome LCD Resin 3D Printer. Cost was around \$500. Note they also make a smaller Mars which I have seen around \$250. The difference is the build plate or the size of the object you can print. The Saturn's is 7.55in x 4.72in x 7.87in while the Mars' is 5.08in x 3.15in x 6.30in.*

*There are new 8K printers coming on-line also, but for the extra resolution looking at real models, I might hold off till their pricing comes down. I bought the Elegoo because a few of my friends had them. There are other great printers out there, but I wanted to get help when I needed it, so that's why I went with the Elegoo.*



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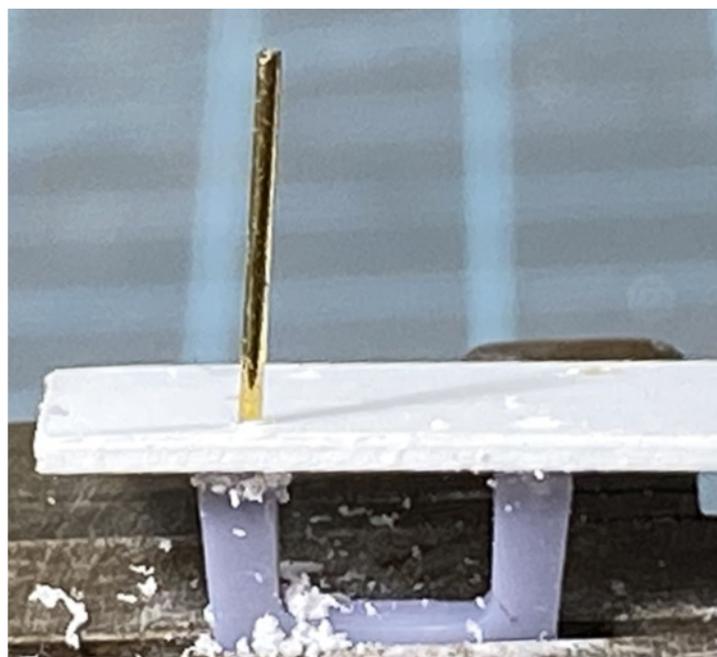
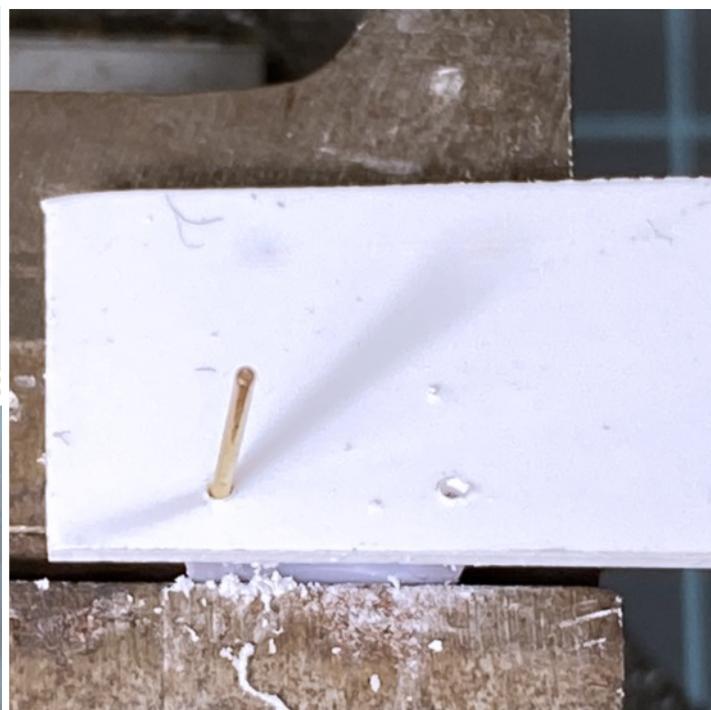
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# A NEW DECODER FOR AN OLD ENGINE - UPDATE

By Dan Dawdy



Last time in the [December/January 2022 issue of \*The S Scale Resource Magazine\*](#) I had installed a new decoder in an S Helper Service F7A. Once again, I need to say I normally do not do installs for others, but for John Albee I don't mind helping. Of course things went wrong and I broke some of the steps off the shell... don't ask.

But now I am happy to say it's finished and ready to go home. I printed new steps in resin and removed the others from the shell. I made a guide for drilling #80 holes into the new steps and inserted small pins. After I smoothed down the edge where the old steps were, I used the same guide to drill holes in the edge of the frame in the same place.

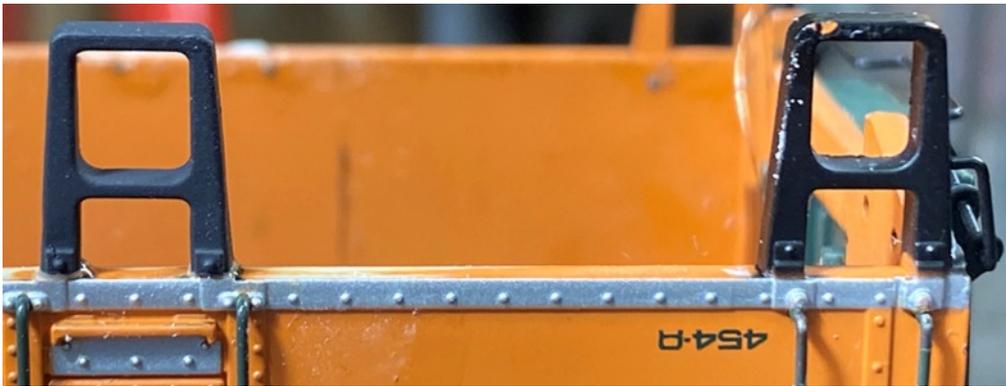
If I were going to do a lot of holes, I would have made a brass jig for the hole placement, but I only had to do six so the styrene worked fine.

The pins will make these steps much sturdier and harder to break off. You can see the difference in the new step on the left in the picture on the following page.

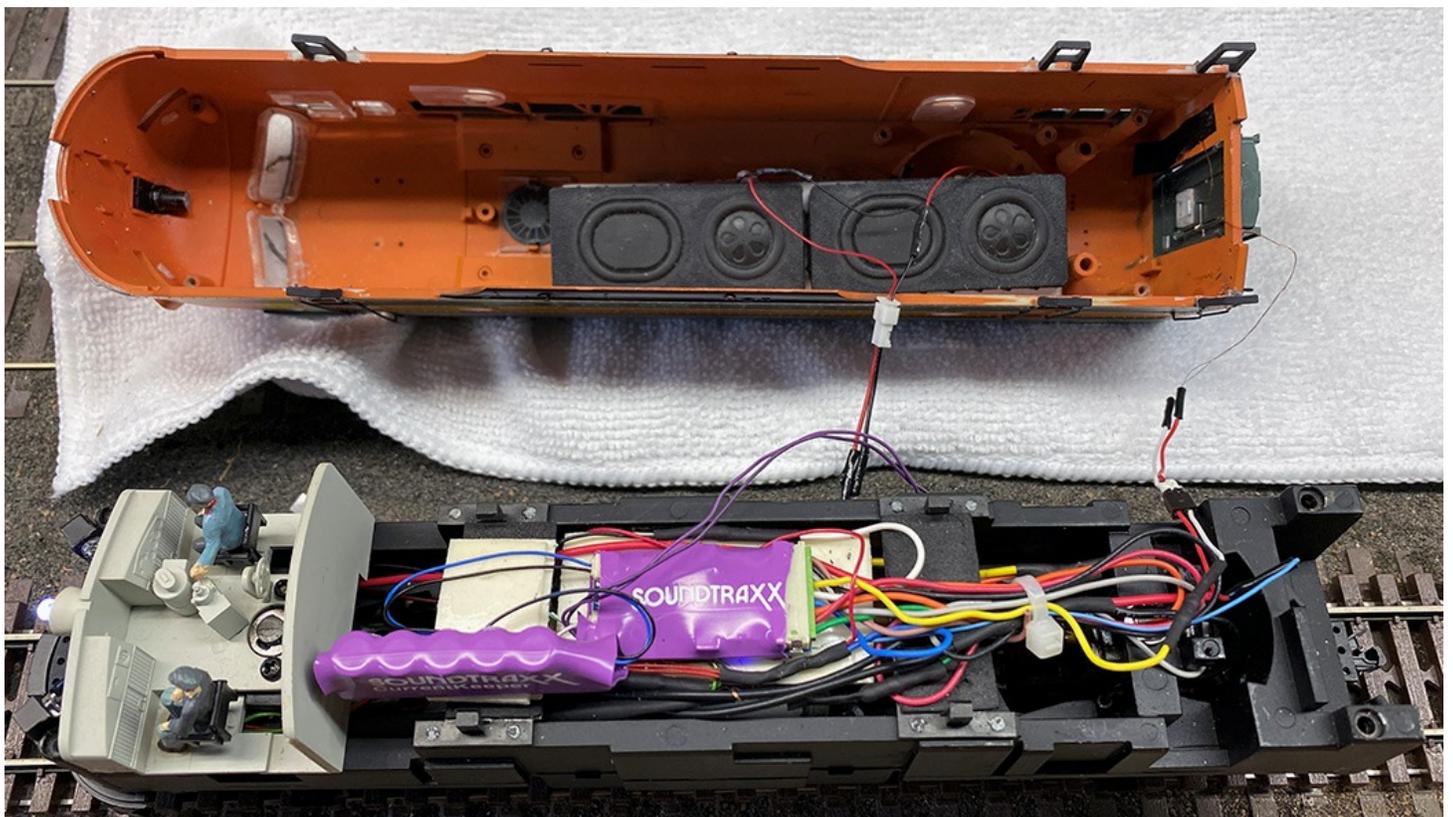


So now all that was left was to fit everything inside the shell and test it.

I had to make a few adjustments... of course I did, nothing ever works the first time around. I really needed a smaller CurrentKeeper like the new SoundTraxx CurrentKeeperII™, but did not want to wait for an order. So I moved the speaker assembly to the right side of the roof and remounted them. The CurrentKeeper could now sit on the double sided tape on the far left side with plenty of room to spare. One last test, and it was time to button this thing up.



The next page shows the engine getting ready for its day's work in the very early morning light. The sequence is as follows: first all lights off; then the number boards are lit; next the class lights show it's going to be an extra; and finally the headlight comes alive.





And finally, a short video showing the lighting functions, as well as the sounds. I can do a bit more tweaking on the start speed, although it's not bad for the motor. Click on image below to view the video.



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**Don't forget to read our other magazine, The 0 Scale Resource, for more modeling ideas.**

# THE HOLE THING

By Steve Wolcott

## Pre-Size Model Specialties

Does the thought of drilling dozens of tiny holes for grab irons deter you from building car kits? Or if you do build kits, do you want an easier way to drill all those holes? If so, read on.

You might know me as a maker of resin car kits. That means I am a builder of those kits. And I also build car kits of other makers, resin, styrene and wood. As anyone who has built a car kit knows, one of the most repetitive and challenging tasks is drilling holes, mostly for grab irons. My latest kit requires over 50 holes. And this can be very frustrating when drill bits break. Drilling dozens of holes with a pin vise was challenging, time consuming and brought forth bursts of swear words when bits broke.

There had to be a better way. I tried using my Dremel tool, but even the slowest speed was way too fast and melted the plastic. This made the hole too big and coated the bit with plastic that could not be removed. Then one day at a train show I stopped by a tool dealer's booth. He had a battery powered miniature screwdriver. It turned slowly and was held like a pencil. And yes, there was a chuck that could be mounted on the screw driver so it would turn drill bits.

I've been using this setup for several years. It has made drilling those #78 holes faster, smoother, less painful. Since the drill is turning the bit I can concentrate on holding it true and steady, so I break fewer bits. Those 50+ holes I drilled on my last kit resulted in one broken bit, and I use carbide bits which are brittle.



There are a number of ways to put this tool together. When I described the concept to Peter Vanvliet, who was building my latest kit, he built the tool using different parts. I'm sure there are other components that can be used.

Peter's setup uses a chuck with a 1/4" hex stem. Most power screwdrivers accept various bits with this 1/4" hex stem. It's important to find a chuck and driver that will mechanically lock together. Some drivers just use a magnet. This will not work when you are pulling a bit out of a hole. These components can be found on ebay, search for "power screwdrivers" and "miniature drill chucks 1/4" hex".



My setup uses a chuck that clamps on a 7mm shaft with a set screw. The chuck is available from Micromark, #86259. The description says it goes down to 1/64", but mine will hold a #79 bit (0.3mm) just fine. The driver is available from Micromark or on ebay, search for "power screw driver general".

Peter's driver is rechargeable and mine uses 2-AAA batteries. Both of us are happy with our tools, and I'm sure there are other combinations that will work to make you happy, too. Now go forth and build those kits.

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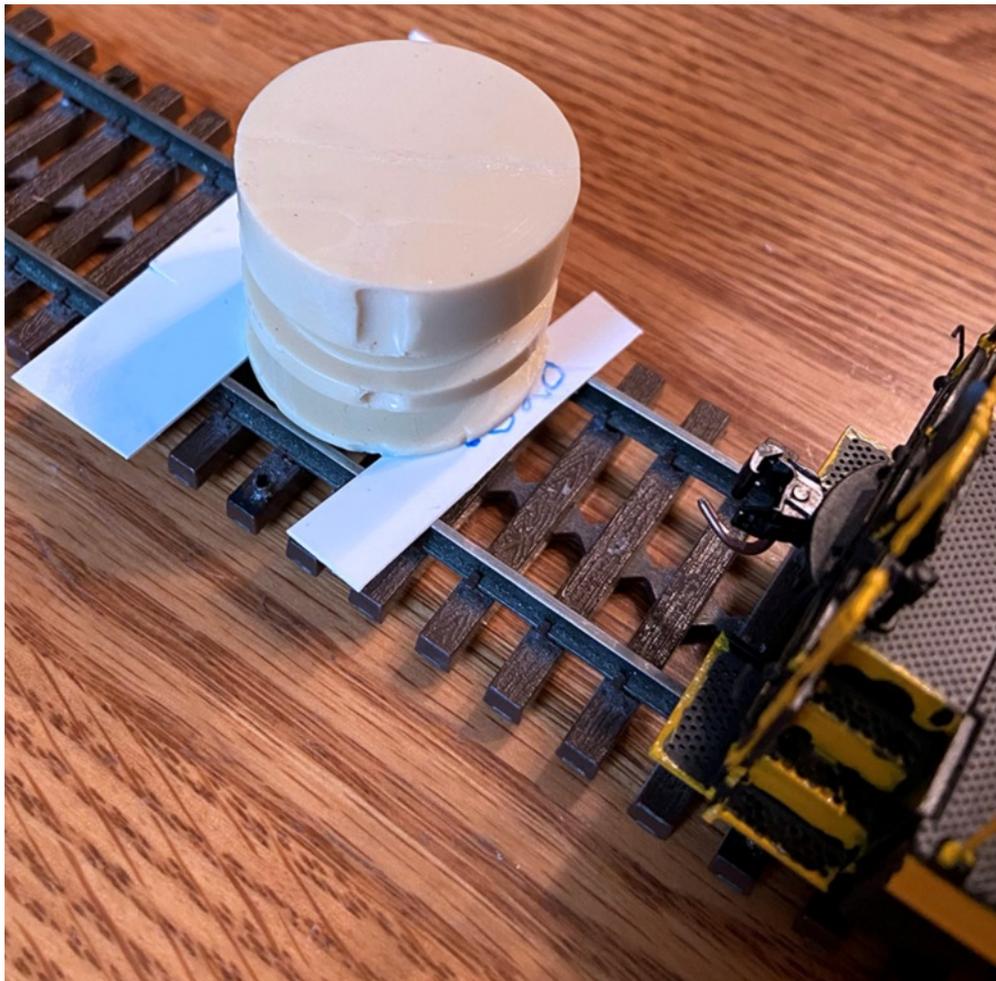
# How I Use the TruGage Coupler Height Gauge

By Tom Dempsey

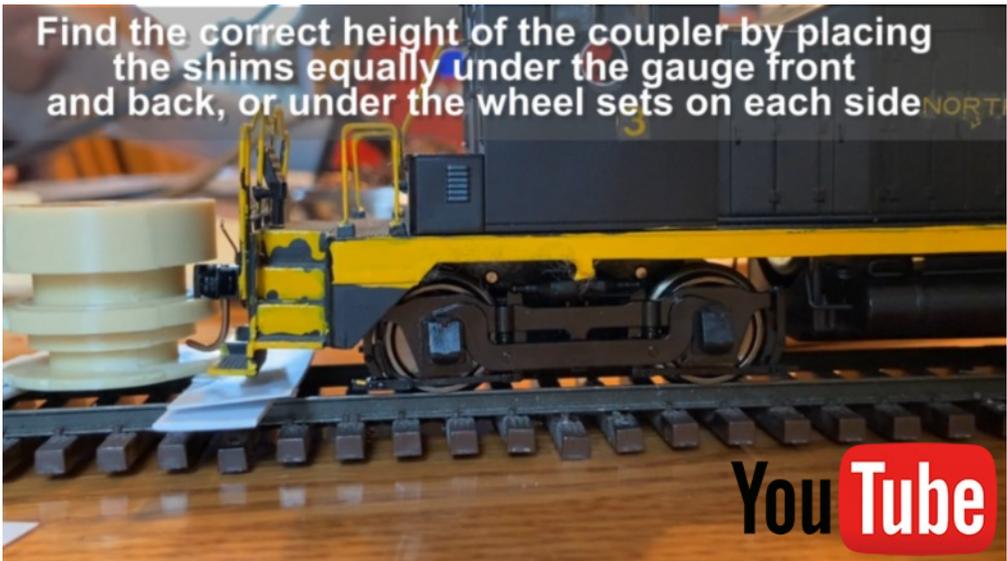


1. Measure the current height of the coupler.

(Click image on the left to watch video)



2. Create some shims long enough to place across the track from sheet styrene. A pair of .010, .020, & .040 should be adequate.



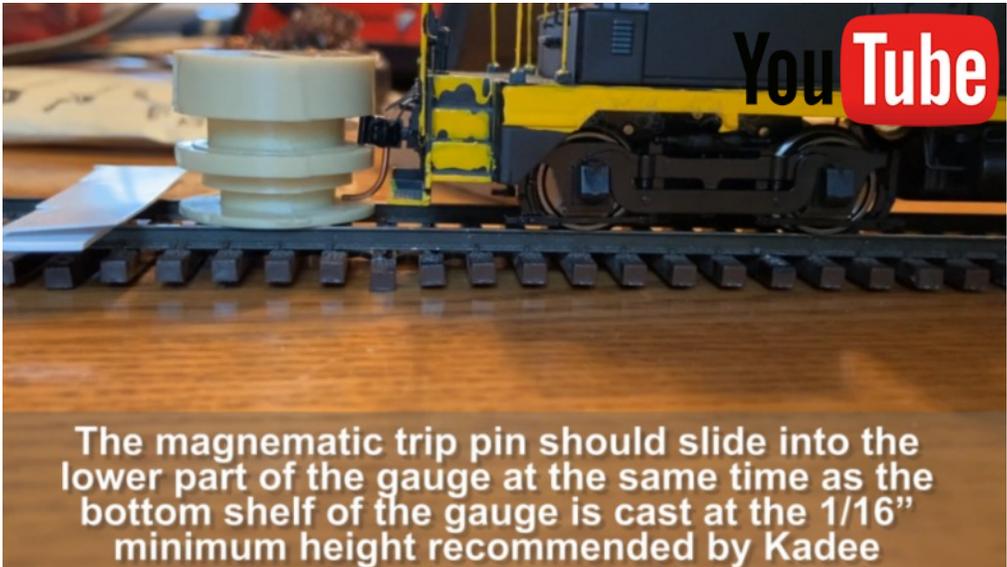
Find the correct height of the coupler by placing the shims equally under the gauge front and back, or under the wheel sets on each side

3. Find the correct height of the coupler by placing the shims equally under the gauge front and back, or under the wheel sets on each side. When the coupler slides into the gauge, the shims indicate the correct thickness to either lower the coupler to correct height or raise the rolling stock to correct height.

(Click image on the left to watch video)



If the coupler is too low as shown on left, you can place the shims under the locomotive wheels.

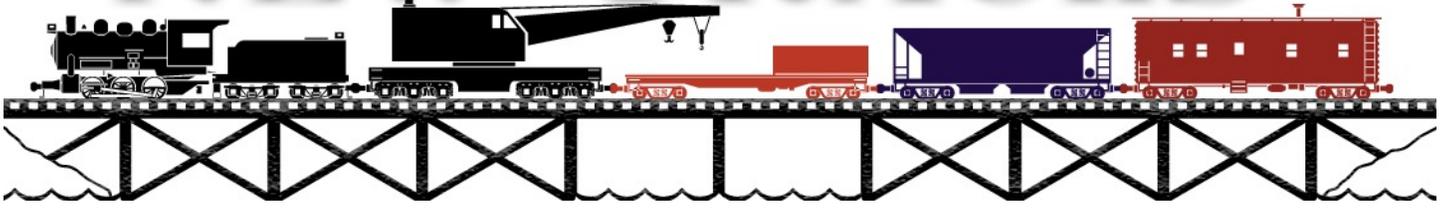


The magnematic trip pin should slide into the lower part of the gauge at the same time as the bottom shelf of the gauge is cast at the 1/16" minimum height recommended by Kadee

4. The magnematic trip pin should slide into the lower part of the gauge at the same time as the bottom shelf of the gauge is cast at the 1/16" minimum height recommended by Kadee.

(Click image on the left to watch video)

# NEW TRACKS



**Mentor Definition: A Trusted Counselor or Guide**

**By Contributing Editor Jim Kellow MMR**



## **MODELING WITH MENTORING FROM TALENTED MODEL BUILDERS AND EVEN FROM MODELERS IN OTHER HOBBIES**

**MENTORING IS A GREAT WAY TO LEARN MODEL BUILDING**



Stan Cedarleaf passed on New Year's Eve.

I just found out about the passing of Stan Cedarleaf, a friend, and a great modeler. Stan was a guest on my "New Tracks" Zoom show, and I was able to profile him in one of my "New Tracks" articles. He also personally provided his creativity and skills to help me complete some of my modeling projects. I had just contacted him about a new project and got this message in reply.

"We are responding to inform you that Stan passed away suddenly and unexpectedly on New Year's Eve. Unfortunately, there is no one with the passion, knowledge, skills and abilities to continue his work. Best regards, the Cedarleaf Family."

This is a real loss for me personally, and of course to our hobby. Stan was so nice and easy to work with and his creativity was second to none. My condolences to Stan's family. He will be missed.

### **"New Tracks" Announcements**

### **"New Tracks" Workshop**

We are starting a new weekly Zoom project on Saturdays JANUARY 22, 2022 at 1:00 pm Eastern time.

These Saturday Workshops resulted from comments I received from modelers about scratchbuilding and Kris Blackmarr's interest and creative ideas to develop the project. Many thanks, Kris, for volunteering to lead this project.

The segments are structured like our popular BUILD ALONG segments, on our Wednesday evening “New Tracks” shows, except these Saturday shows are designed to show modelers how to scratchbuild a model. I personally believe that scratchbuilding is one of the most creative parts of model railroading, and I think you will agree if you try it. Here is your opportunity to work with and learn from skilled modelers the art and skills involved with scratchbuilding a model. Give it a try.

You can learn the steps, skills and techniques involved in scratchbuilding a model in any scale you want. There are no kits to buy, only the needed scratchbuilding supplies, so cost is at a minimum. Model plans and photos will be used that you can download on your computer at no cost.

The show’s moderator, Kris Blackmarr, a very talented and artistic modeler, and he, as well as his guests, will guide you through the complete scratchbuilding process, one small step at a time. After all, that is what mentoring is all about.

If you are a beginner, join in and experience the thrill of completing a scratchbuilt model and being able to stand back and say, “I built that!”. Believe me, there is nothing like this feeling!

If you are a more experienced or advanced modeler, join in and offer your advice and knowledge to less skilled modelers and even get some fresh ideas yourself. After all, learning from other modelers is how we all have learned about modeling. Now you can be one of the teachers to help others. The live shows will be recorded on YouTube so you can refer to the information later as needed. I hope you join us each Saturday at 1:00 pm Eastern time and help make this new project a success.

### **An Inventor Segment June 15, 2022**

Peeyush Garg of the LocoFi™ Team will be our Featured Inventor on my “New tracks” Zoom show June 15, 2022 at 7pm Eastern Time. He will discuss the new features and capabilities of his LocoFi™ control system. In addition, he will sponsor a Contest Drawing where one viewer of the show will win one of the latest versions of his product. This is a great opportunity to meet and talk with the inventor of LocoFi™ and maybe win one for yourself. You can take your LocoFi™ equipped locomotives and operate on anyone's DC or DCC powered layout without changing a thing. This is a significant advantage for LocoFi™.

### **Subscribe to our New Tracks Modeling Website and YouTube channel**

“New Tracks” articles and Zoom events introduce modelers to talented experienced modelers who could become your mentor, or at least give you guidance to improve your modeling. We currently have over 1,200 subscribers and hope you will join us.

Please subscribe to our website [newtracksmodeling.com](http://newtracksmodeling.com) and verify the confirmation email to get the latest information about what we are planning on our shows and get the Zoom log in link. Also, please subscribe to our [YouTube channel, New Tracks Modeling](#), click the BELL and hit ALL to get notices about all our live streaming YouTube shows and view our past recorded show videos.

Please also send the Zoom and YouTube log in links to your friends so they can also join in the mentoring and fun of our shows. Thanks in advance for your help and support. Word of mouth is the best way to advertise our shows.

### **Want to help?? Volunteer to participate in a segment of our show, or help produce our Zoom/YouTube shows.**

We are fortunate to have three new volunteers helping us produce our shows. Chris Smith, Dennis Kamper, and Kris Blackmarr. Thanks to all of you for your help.

Everyone who watches our shows has a contribution to make. Offer your help in participating or making and producing our Zoom and YouTube shows, or help with our Website. Any amount of time and help you are interested in providing is greatly appreciated.

Our show is a live participation show, not just a sit and watch show. Keep in mind, mentoring is a two way street. It requires communication between modelers who want to share their knowledge and skills, and modelers who want to learn their skills and techniques to improve their modeling. All skill levels are welcome and needed. Contact me at [jimkellow@newtracksmodeling.com](mailto:jimkellow@newtracksmodeling.com) and let's discuss.

### **Show us your modeling on our monthly "MY BUILD"**

The monthly "New Tracks" MY BUILD segments are the opportunity for viewers to have their work featured. You can show off your latest project, modeling technique, new tool, or even give a tip you learned that helped your modeling. Use this opportunity to engage with the New Tracks modeling community for advice on a modeling quandary. Your project doesn't need to be completed, and it certainly doesn't need to rival the works of John Allen. In fact, it might be a model that helped you learn and grow from your mistakes. So join in: "If you Built it Share it".

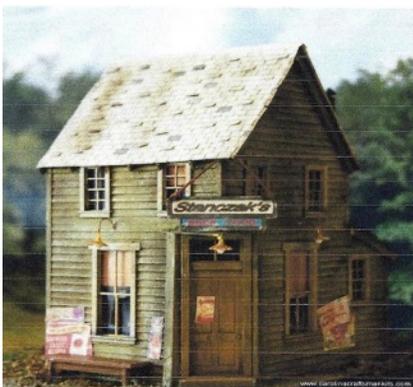
The MY BUILD segments are sponsored by The Model Railroad Resource LLC publishers of the [O Scale Resource](#) and [S Scale Resource](#) magazines, which are "Putting the modeling back in model railroading!®"

These two magazines carry my "New Tracks" articles and have supported my efforts to promote mentoring and get more modelers building more models. It is true that the only difference between a master model builder and novice is that the master modeler has made more mistakes in building models and learned how to correct them.

MY BUILD segments are held once each month during the regular Wednesday night "New Tracks" Zoom show. In addition, as a new feature, every model shown in a MY BUILD will also be published in one of my "New Tracks" articles in one of the sponsoring magazines. The upcoming MY BUILD segments are scheduled for January 19th, February 16th, and March 16th, 2022. This is the time to plan for which projects you want to show at these events.

To participate send photos with a brief description and your name via email to Chris Coarse at [atrailrunner130@hotmail.com](mailto:atrailrunner130@hotmail.com). Chris will incorporate your photos into the show. When your photos come up, you will have time to share your experiences and learning from the model with the "New Tracks" community. I believe each of us has unique modeling talents and skills, and showing your modeling can be a great motivator for other modelers, it is a significant part of mentoring. Please participate in these segments and help make them successful.

**Our "Build Along" modeling experiences gives you a personal mentor. Join in a great learning experience.**



### **Kershaw Craftsman Kits**

Starting February 9<sup>th</sup>, Paul Reeves, owner of Kershaw Craftsman Kits, is teaming up with Martin Breckbiel MMR who will build his [O scale kit called Stanzack's Bar](#). This is a Laser cut structure with detailed front and rear. Paul says it is an: "Easy build with craftsman results. Comes with adhesive backed shingles for added realism. Footprint is 4 1/2" x 5". There is a 20% discount of the kit for Build Along modelers who use the code word NEW TRACKS On their order for the kit between January 9, 2022 and February 16, 2022.

## Sea Port Model Works

Starting February 23, 2022, Bruce Nickerson, owner of Sea Port Model Works, will start building his Kit #H136W A Waterline kit of a 53' Coastal Steam Passenger Ferry in HO scale. Bruce is offering a 25% discount off the price of the kit to New Track modelers who want to build the kit along with him.

This specific vessel would have been designed, built, owned, and operated by local families, captains, railroads, or investors, etc. The steamer that we present through this kit is similar to the one we are familiar with called the Sabino or originally called the Tourist. The Sabino is up and running in Mystic, CT at the Maritime Museum. This model is not a model of the Sabino, but similar, and would have been used for very similar purposes. It will carry a lot of passengers, mail, and heavy cargo and attempt to keep schedules. It will make multiple stops at various islands and mainland harbors to deliver and pick up mail, produce, dry goods, livestock, groceries, etc. etc. This kit, with some minor modifications, could be converted to a double decker which would increase passenger capacity.



This kit represents a small steam powered vessel working on the East or West coast, lakes, rivers, or oceans carrying on commerce that was vital to the growth of our nation, from the mid 1800's to mid 1900's. There is so much to say about these steam powered vessels that have a distinct parallel with our nation's history. I strongly recommend that you read up on the subject. Here are a few great books that you might have a hard time putting down:

STEAMBOAT DAYS by Fred Irving Dayton

STEAMBOATS YESTERDAYS (ON CASCO BAY) by Capt. William J Frappier

STEAMBOATS of GLOUCESTER and the NORTH SHORE by John Lester Sutherland

STEAMBOATS COME TRUE by James Thomas Flexner

Bruce was recently on our Zoom show and this "BUIID ALONG" is a result of modelers' interest in his models during his presentation. If you have not built a ship before, Bruce says don't worry, it is not much different than building a craftsman structure kit since the hull is a resin one piece part and there is very little rigging to do. I am looking forward to this as it is our first ship building project for the show. Thanks Bruce for your help.

## Hunterline

Starting March 30, 2022 Rick and Maureen Hunter will start building a Hunterline 50' Queen Post Covered Bridge. Kits will be available in Standard or Narrow gauge in N, HO, S, and O scales This time they plan to video the segments and pre-send them to whoever will be doing the Build Along with them. Then they will also build the model live on each of the show segments. More details including the price discount for modelers doing this Build Along will be available soon on our website [newtracksmodeling.com](http://newtracksmodeling.com).

## Wit and Wisdom Models

Starting April 6, David Vaughn, owner of Wit and Wisdom Models, will start a Build Along of one of his new John Armstrong inspired kits. Details including what scales will be included and price discount for "New Tracks" modelers, will be available soon on our website [newtracksmideling.com](http://newtracksmideling.com).

## Conowingo Models

Starting May 25, 2022, Chris Course, owner of Conowingo Models, will be building one of his new kits. The kit is called "THE KELLOW STATION". Chris said since I am a trolley modeler, it will be a trolley station. What a great honor to have your name on a model kit. Thanks Chris. I can't wait to see it. More details can be found soon on our [New Tracks Modeling website](#).

## Banta Models

Starting June 1, 2022, Bill Banta, owner of Banta Modelworks, will start a "Build Along" of his Banta model On30 Caboose kit.

Laser cut wood caboose conversion. Fits Bachmann 18ft On30 Flat Car. This kit is all laser cut wood and laser board. Includes wire and bending fixtures. Based on a caboose from a logging railroad, it's really a cool looking addition to your fleet. Like all of our kits, it's a fun build backed up by our no questions parts replacement, you break it, missing or lost, the dog eats it, no cost to you.



This is the first On30 scale BUILD ALONG we have done. It is the result of comments I have received asking what is involved in using a HO scale chassis from one manufacturer, in this case, a Bachmann 18' flat car; and using a O Scale body kit from another manufacturer, in this case, the Banta Modelworks Caboose kit, and building a On30 scale model. This may sound complicated, but Bill will show you how easy it is. Here is your chance to find out how On30 narrow gauge models are created and why On30 has become a significant part of O scale modeling. Bill Banta is

offering a 20% discount off his Caboose kit to "New Tracks" modelers who BUILD ALONG with him on their orders specifying it is for "NEW TRACKS" May 1, 2022 until June 15, 2022.

More Build Alongs to come. I hope you want to participate in all the "Build Alongs". The modelers and manufacturers, who are making these events possible, are doing them to try to help you improve your skills and have more enjoyment and confidence in your modeling. They are a true learning experience that have helped many modelers. Join us.

This program is providing modelers, their own personal mentor on our shows. So if you have been sitting on the sidelines for awhile, give model building a try. I believe you will have some fun. It is really great for me to hear the enthusiasm and excitement from first time or previous armchair builders from their experiences by participating. Please show your support for these events by your active participation. Thank you.

I am looking for more modelers and manufacturers to be involved in future "Build Alongs" in 2022. I have several scheduled so far, so if you are interested, please let me know. Remember a model builder can select the dates, manufacturer, and specific kit, you want to build. A manufacturer can build his own kit, find a modeler, provide a model builder, or I will find someone to build their kit. Contact me at [jimkellow@newtracksmodeling.com](mailto:jimkellow@newtracksmodeling.com)

We have several other modeling segments on our Zoom shows.

### "Watch Me Build"



These segments are meant for modelers who want to share their modeling efforts and discuss their modeling techniques so others can learn and benefit from their model building. These segments can be for one or more shows depending on the detail included for the model building presentation.

July 6, 2022, Pat Rivard and Paul Hurly will do a segment "Making Coniferous Trees". This will be a 40-minute DIY PowerPoint presentation by Pat and Paul where they will share their easy-to-follow six steps to build realistic foreground and mass planting coniferous trees in O and HO scale. They will show how to use a variety of tree branch materials to recreate species that are seen throughout North America.

You may never have shown your modeling before in public for a variety of reasons. I assure you, I think you will enjoy and benefit from participating in these segments. My email is [jimkellow@newtracksmodeling.com](mailto:jimkellow@newtracksmodeling.com) if you would like to discuss your idea by telephone, you can get my contact information off our website.

For example: October 6, 2021 Kris Blackmarr started his soapbox modeling series which now has evolved into a separate Zoom show about scratchbuilding, called the

"New Tracks" Modeling Workshop each Saturday at 1:00 pm Eastern Time.

### Ask A Modeling Question

These segments are where viewers can ask modeling questions and get answers from other modelers on the show. It is a forum where viewers can help each other solve specific modeling problems or offer advice on modeling techniques. We have a form on our website you can use to ask your questions. This allows us to schedule the appropriate time for this segment on each show. Don't hesitate to ask questions, after all that is how we learn new things.

### "Remembering Old Kits"

Modelers will be building kits from our distant past that are either no longer manufactured or hardly available. Kits whose names we may have forgotten, but when we hear their name again, bring back great memories from our youth and remind all of us what modeling used to be like.

The first two segments had Martin Breckbiel, MMR building a Van's Car Shop and a Train Craft kit. If you have an old kit and want to participate let me know at: [jimkellow@newtracksmodeling.com](mailto:jimkellow@newtracksmodeling.com).

## "Let's Go To The Hobby Shop"

Meet local hobby shop owners who may become your new best friend. I must admit it has been a very long time since I have been to a hobby shop.

I recently talked with the National Retail Hobby Shop Association and wrote an article for their publication called "A Modelers View" where I talked about the importance of model builders and mentoring to the hobby shop industry and the issues that we both, modelers and hobby shop owners, have in common. It was published in the Association's October Member only magazine, "Hobby Merchandiser".

I believe it was very well received and I have already scheduled some of their members on future shows. The first member will be Steven Elliott, a member of the NRHSA Board of Directors and owner of Fundemonium Hobby Shop on February 9, 2022.

If viewers have a hobby shop to recommend to be on our show, or you are a hobby shop owner who is interested in being on our show, please let me know. There are not many hobby shops left around the country and I believe they need to be recognized and supported. So please tell me about your hobby shop at [jimkellow@newtracksmodeling.com](mailto:jimkellow@newtracksmodeling.com) and I will ask them to be on our show.

Now, let's meet some very talented modelers. First, it's off to South American to meet a Diorama Artist.



### Victor Encalada J.

My name is Victor Encalada J. I was born in Ecuador South America in 1977, and since I was a child I loved to create with paint, dough and play with my hands. I started the art of dioramas about 4 years ago motivated by that passion to create and supported by my wife, Ceci, and my children, Tasho and Nico.

I learned to build on the basis of trial and error. I created scenarios in my mind, and was able to make my own materials for use in my dioramas that only existed in my mind until I gave them real essence, mass, body depth, soul and heart.

I have made several sizes of dioramas, being my favorite 1:64 cars. Inspired a lot by the 40s, 50s, 60s and part of my hyperactivity has led me to make the dioramas my escape valve and ideal hobby, they are all part of my life and mood. Every one has my details, forms, favorite colors and, I present it to people and like it.

My first diorama was a Mustang P51, I still own it, it has some errors that are not noticeable, but it was the one that gave me the impulse to continue.



I would like to be an example so that many people can elaborate what they like, no matter if they do it well or badly, the important thing is that you like yourself, as a sign that we all have imagination without any limit.

Soon I will enter the area of trains and space birds that I also like. Thank you for the opportunity.

Please visit: [N&N Brothers](#) (Facebook) / [#nnbrothers1977](#) (instagram)



*Diorama Garage 1:18 scale ( Photo Victor Encalada )*



*Diorama beautiful view 1:64 scale*



*Miniaturas 1:18 scale ( Photo Victor Encalada )*



*Diorama D-520 ( Photo Victor Encalada )*



*Diorama My Way 1:64 scale ( Photo Victor Encalada )*

Thank you Victor for your interest. I look forward to seeing your model railroading dioramas. You can reach Victor at: [Victor.Encalada@sscaleresource.com](mailto:Victor.Encalada@sscaleresource.com)

Next meet a Mentor of mine, who may become one of yours.

I found this modeler shortly after I was told that card modeling was a subject I should write about. Kenneth is one of the first people I found who offered to help me on my journey to learn about a new modeling medium.

I had found a mentor and was I lucky. Not only was he going to help me, he modeled in a part of the world and about ports and some other subjects I knew well. So it was a marriage made in heaven. My education began.

Please meet a modeler who, I believe, may stimulate your interest in card modeling just like he did for me.



### Kenneth L. Anthony: "A LIFE IN CARDBOARD"

Actually, I have not been building cardboard models all my life. I didn't start until I was three years old, with railroad model cutouts printed on the back and insides of Kix cereal boxes. I had some Marx electric trains which were better than the cardboard ones, but I liked being able to make train models for myself. That was in 1947.

In 1951, I was in second grade and I liked reading the *Toy Trains Magazine* Dad was bring home, which focused on Lionel, American Flyer and Marx trains, which it called "tinplate". I also saw the same company had a magazine called *Model Railroad Craftsman*, but it looked too complicated for me. I thought the big Lionel 3-rail trains were better than the small two-rail trains. After all, they were bigger. *Toy Trains Magazine* featured cutouts on their back cover to build model railroad structures. I learned how buildings are laid out on a flat sheet that is bent and assembled. The magazine also ran a series of what they called 3-D cutouts that were actually shallow depth background buildings, made to be pasted or glued over standard cigar boxes. The buildings themselves disappeared with my childhood, but I kept the magazines and a

**FULL COLOR CUT-OUTS**

WE hope that the fellows who like those cover photos won't mind our using the space this month to present a full color railroad station cutout instead. Patterned after the typical branch line or small town station, this structure can be put anywhere on your layout, even if you already have one or two stations. The more stations, the more stops you can make; and the more passengers you can pick up, the more fun you'll have with operation.

Construction details are the same as for all the cutouts that have been presented previously. After reading the following instructions carefully and studying the photo on the opposite page, remove the back cover from the magazine and coat the reverse side liberally with rubber cement; also smear rubber cement all over a sheet of thin cardboard, such as a filing folder or bristol board. When rubber cement is dry, press the two sheets together, taking care not to get any bubbles or wrinkles in the sheet. Now cut out all of the parts.

Cement the two parts of the walls together first, using acetate cement. Fold the walls where indicated by the heavy straight line and also fold the tabs. Note that one side of the station is longer than the other because of the bay window which must also be folded out.

All windows and doors may be cemented in place. Don't use too much cement as it will squeeze out along the edges leaving shiny blobs when your model is completed.

The roof of the station is not included with the cutouts; you will have to make one from any heavy cardboard stock. Dimensions for the roof are shown on a sketch on this page. When cut to the overall shape, paint black or any "roof" color that you like, fold as indicated in the drawing and cement in place. Finish the model by cementing the Western Union and Station signs in place.

The model can be improved in appearance by making the station surroundings attractive. There should be a walk on which the passengers can stand and this should be at least two car lengths long if you can spare the room. Make a small car parking lot, some grass and shrubs, and a signal of some type. You can also have a short siding right opposite the station where freight cars are spotted for unloading and loading by shippers who aren't located right on the line.

Many readers have written in about the cutouts and many state that they don't like to cut the magazine. To these readers may we suggest that they use the cutouts as plans from which to make their own structures from cardboard or wood. No one will find that more than possible than in evening's time even if you have to make all the parts yourself.

On the right is our little passenger station, in place on a model railroad system. The little figures even use our "box" sign.

TOY TRAINS • NOVEMBER 1952

**PALACE CINEMA**

**A TOY TRAINS 3-D CUTOUT**

Our city grows this month with a building to house a theater and business offices. Build it in a few minutes for your own model pike.

MOSHE N. PINKSHER came to this country as an immigrant many years ago and as a small boy, got a job in an early nickelodeon as an usher and gradually, as he became older, worked his way up as assistant manager, manager, and finally owner of a chain of theaters. One of these is the Palace Cinema, the latest in the Toy Trains 3-D background series. And, next door in the same building is an ice cream parlor where movie patrons head when the show is over. Let you'll never guess who runs the ice cream emporium! It's a friendly old fellow known by all as Pop Sickle and up on the second floor is the Mr. Job Foyah Employment Agency. Quite a building we have here and one which you'll want as a companion to last month's hotel cutout.

As with last month's project, the Palace cutout can be mounted on an empty cigar box as appeared in last month's project. If you can't get a box to the right shape, you can mount the cutout on a box made of heavy artist illustration board which you can make yourself. There is no need to mount these 3-D cutouts on thin cardstock first. Just cement them right in place on the box.

After the building has been cemented in place, you'll want to cement the theater marquee in place over the doors. Thread can be "sewn" through the marquee to a point below the second story windows, if desired, as though they were reinforcing cables.

The Palace can be made into a conventional building if you'd prefer by simply extending the sides and roof back so they are about 5" long. Sides, roof, and end are made of heavy card stock or illustration board.

Both the Palace cutout and last month's Hotel cutout are part of a new series which are designed to be placed against the back wall of your pike to form a three dimensional background. Conventional buildings and scenes can be placed in the foreground, as well as the mainline terminal. With a street and sidewalk placed in front of the three-D background, the city will actually be less than 5" in depth and yet will give the appearance of a big city. You can even place the buildings against the scenic backgrounds which appeared in *Toy Trains* last year (Dec. 1952-May 1953) and which are still obtainable from the Circulation Dept., *Toy Trains*, Ramsey, N. J. The entire background is about five feet long and needs only to be hand colored for use on your pike.

We're frankly amazed at the way comments on the cutouts continue to pour in but all too few readers send in suggestions as to what they'd like to see. We want the cutouts to be the most value to you and they can achieve that aim only if you let us know what you want. Won't you drop us a line to tell us your wishes?

42 TOY TRAINS • FEBRUARY 1954

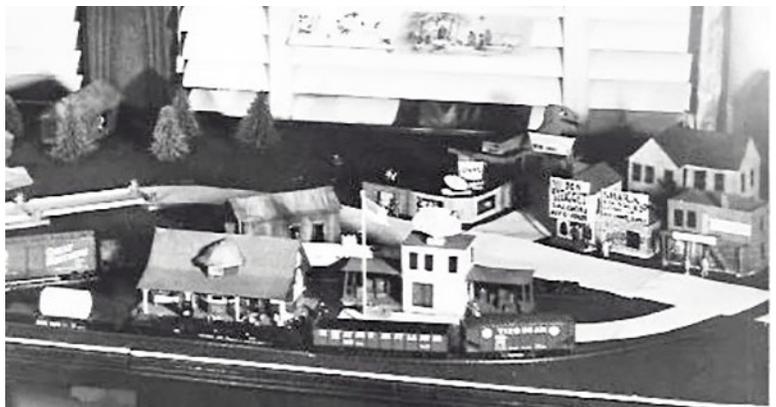
few years ago scanned the inside pages with descriptions and instructions for the cutouts. (Now the magazines are gone too, along with 800 issues of rail and model magazines I disposed of so I could actually have space to build a layout...)



I read in the magazine about building to scale and that O scale was  $\frac{1}{4}$  inch to the foot. When I was ten years old, I got a yardstick and measured the doors and windows on my house to get typical dimensions, and then calculated scale doors and windows on a school ruler to lay out a freelanced model on a shoe box lid. I also took a photo on the first roll of film I shot on my first camera. The camera had a cardboard body too!

When I was 14, my dad was killed in an accident and my mother sold off our 15 sets of Lionel trains for a couple hundred dollars, because she figured my brother and I were getting too old for toys. Within three years, I was back doing trains in my spare time as a college freshman, this time with a cheap HO dockside switcher and a basic oval of track on the dining room table, paid for out of my own money. I couldn't afford those neat craftsman kits I saw in magazines, so I laid out my own buildings on cardboard, either as copies of commercial HO kits or from my imagination. I especially remembering copying the Alexander haunted house model in cardboard. The Revell small-town-station was the only non-cardboard model on the layout.

Jump ahead a few years. After college I went into television news and spent a week in West Berlin in 1971 (and took my first ride on a non-tourist non-amusement park train!). I built a tiny 27 x 34 inch layout representing some elements of Berlin in N scale. I "invented" something that was not-quite cardstock modeling, but related. Nearly all the structures were European plastic kits, but I had a street that converged into the backdrop at a kind of wedge. I needed a very thin building to continue the row of stores into the background. I was looking through catalogues - didn't want to have to order something else from Europe and wait for it to come. I had some photos of street scenes, but they were just TOO realistic next to the models. The box that one of the kits came in had a picture at about the right angle. Then it dawned on me. Using a picture of a MODEL on the background would blend better with a plastic model placed next to it, than a photo of a real building. I cut out the illustration on the kit box lid and mounted it on the background. Seemed to work.



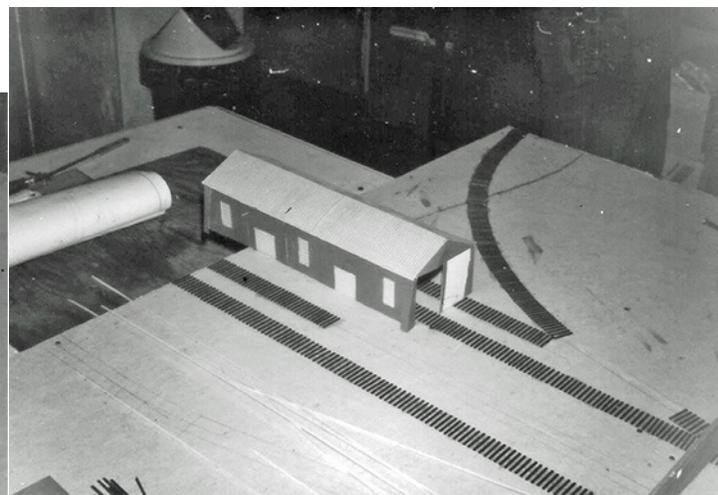
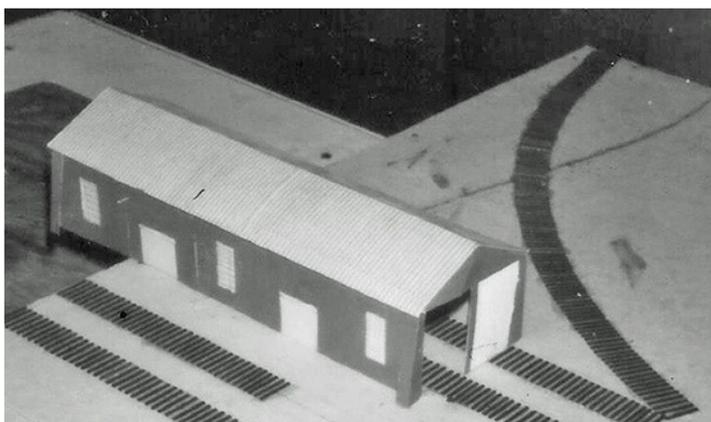
In looking for European structures, I came upon ads for European paper models. I didn't see anything that fit my Berlin scene, but a cutout model of Neuschwanstein Castle looked like fun. It was printed on stock about the weight of index card, and I wasn't sure it would hold up well without wood or heavier cardboard reinforcing inside. I kept planning on figuring out how to do it really well before starting. Finally I got tired and just put it together and it came out so-so. My fault. But still fun.



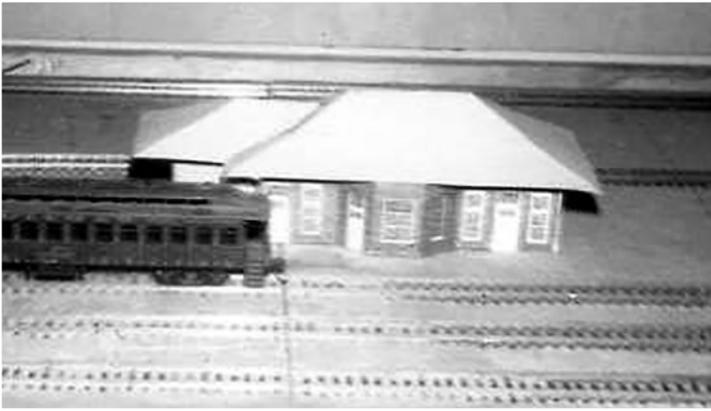
I joined NMRA in 1973, and their Bulletin had a special once-a-year, sometimes twice, feature – a centerfold printed on cardstock with sides for some special freight car in multiple scales. They had instructions to scratchbuild a wooden body inside for the car sides, and I built a Heinz 57 Baked Bean reefer in N scale.

In 1976, a club in Corpus Christi, Texas began to plan and build an HO sectional display layout representing the Texas Mexican Railway Union Station area in that city as it was in 1926, the year the deep-water port opened. The layout was designed with condensed, but schematically close-to-prototype track arrangements, based on old city planning maps. Sanborn Insurance Maps, not online, but in big 2-foot-square in a library archive provided 1" = 50' plans of building outlines. The books were too big and clumsy to photocopy. Copies of relevant building plans were made by measuring them in the original book and making a

drawing by hand. From that, visualized perspective views and scale elevations were drawn. In some cases, the buildings to be modeled or their duplicates still existed, some as the 2-stall enginehouse which still stands in 2018, or the still-standing Alice depot 40 miles away built to the same plan as the Corpus Christi one. Here's where cardstock modeling comes in. We built cardstock models of the layout's structures before tackling them in basswood or styrene, to see how they would work on the layout. In one case, we took one of the mockups



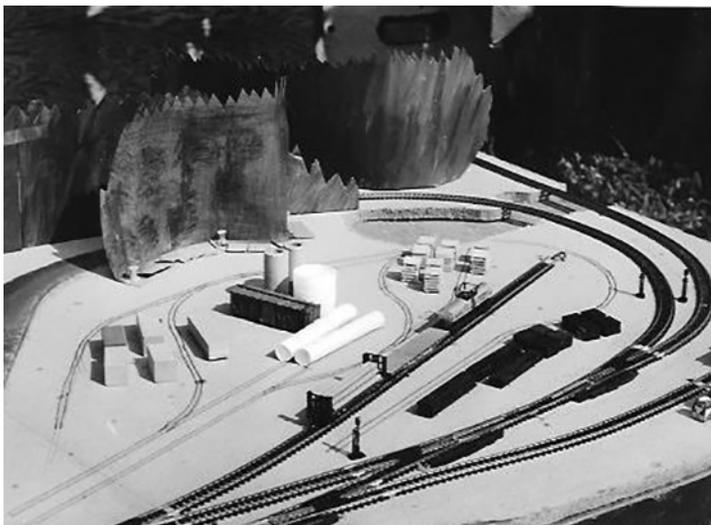
to Mayor-Pro-Tem Gabe Lozano, with whom we had done an oral history interview. “Yes,” he told us, “that was the freight station office where he had worked 50 years earlier.”



**CARDSTOCK MODELING HINT.** Back in the 1970s, Walthers sold printed paper sheets in HO and O, maybe other scales too, with brick, stone, clapboard, board-and-batten patterns, roof shingles, and with doors, windows and generic signs. These could be cut and glued into structure wall and roof sections as they were laid out on cardstock, to save lots of drawing time. These have not been available from Walthers for years, but modern cardstock modelers can download printable structure textures, doors, windows, storefront etc. from a number of resources. Cut-and-paste in a computer graphics program – or cut-and-paste the old-fashioned way with paper, scissors or modeling knife, and glue.



About 1980, I started an N scale East Texas Santa Fe layout. The early development included a use of a number of mockups and stand-ins, including cardstock models, to work out the townscape of a county seat in the piney woods. One early version included a cardboard mockup of a Santa Fe small town depot, a scale 24 foot deep not counting the bay window and platform.



A freight house track on the back side of the depot seemed desirable. Extended a bit, a couple of car lengths of the track could be a team track, for extra operation. But the mockup showed that the depth of the depot would make the freight track go too far back, take up too much room needed for the business block. Also in the photo: a cardboard mockup experimenting with a concept for a courthouse in the right-center of the picture, a mockup of an idea for a scratchbuilt bank in the middle of the block across from the courthouse. Further back, kit fronts attached to boxes to mockup building ideas.

Cardboard cutouts of jagged evergreen tree lines were used to mock up scenery to divide a two-sided table layout into two scenes, and to back up a creosote treating plant.



To solve the depot size problem, another prototype Santa Fe depot was found that was shallower in depth. Two windows wide on the ends, rather than four windows as the first try. Only 8 scale feet difference, but a new mockup showed that the change would work, and allow a freight house track on the back side. The original depot seemed too small, probably because of its length. The replacement followed a longer prototype that gave an impression of larger size in less depth.



Eventually (hope this doesn't disappoint cardboard modeling fans too much), a detailed depot scratch built in styrene replaced the mockup.

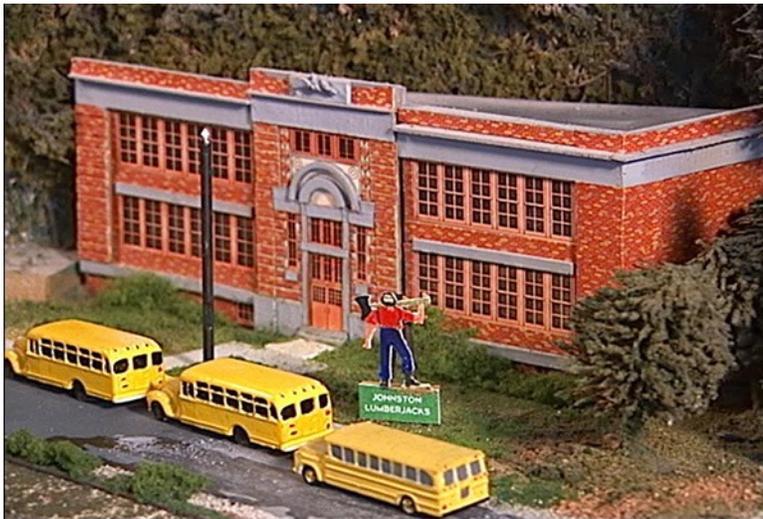
A bank building scratch built from styrene, beads, wood, metal rod, window screen splines and leftover

kit doors & windows replaced the cardboard mockup, but the cardboard structure had proved the design and held the place of the finished building at least a year. And this was the finished creosote treating plant scene, with a road past the plant disappearing into the trees, as planned through cardboard mockup scenery.



Another cardboard mockup that did its job well – I just didn't do my job of replacing it with wood or styrene. I wanted an “old-family” mansion near the town square, and I had a prototype half a block from TV studio where I worked. Also half a block from Tex-Mex tracks the local club was modeling for its display layout in the 70s, and I had drawn plans and had an HO model halfway built. (LOTS of things I have done “halfway.”) I built an N scale cardboard mockup for my layout, using Walthers N scale printed doors and windows. Never got around to building my intended finished model, and the cardboard mockup filled the spot just fine. It stayed on the layout until it was dismantled, never replaced by a “real” model.

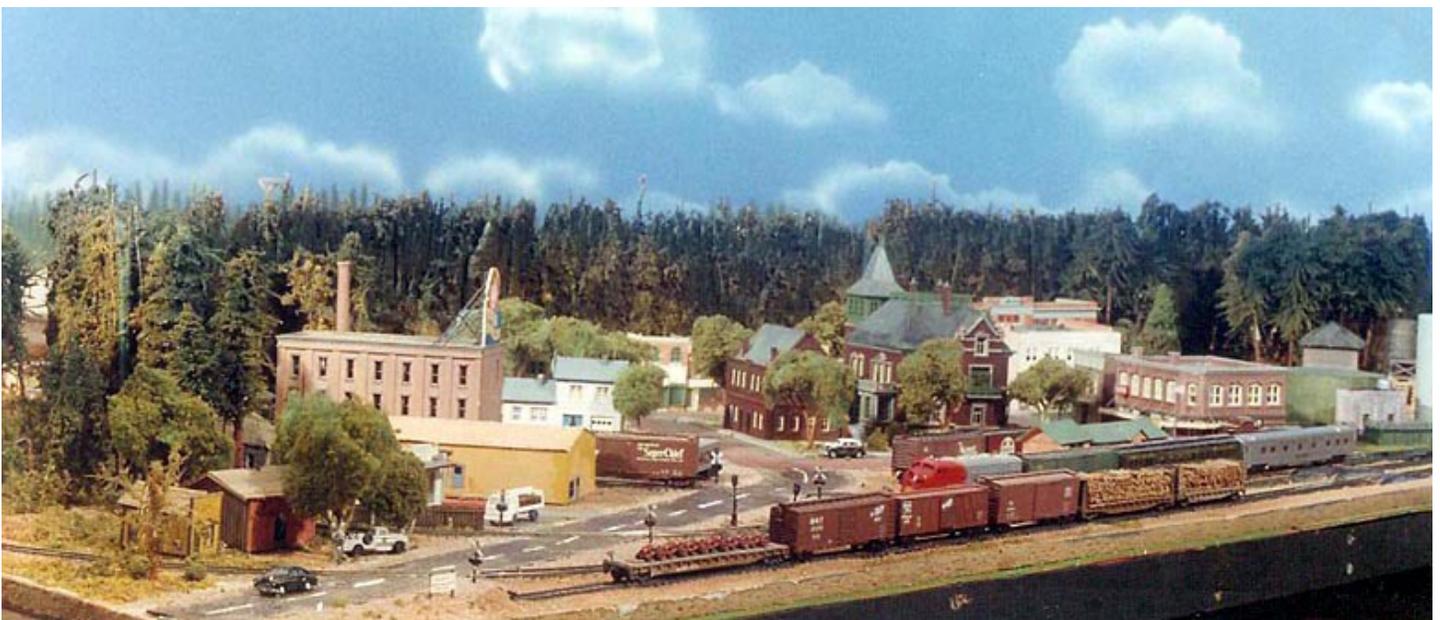
The most successful and satisfying cardboard model I ever built came on my East Texas layout. I felt public infrastructure was under-represented in model towns. Modelers generally seemed to build railroad structures, industries, stores, and a few houses. I wanted to model as much of the public facilities that might be in a real city for my courthouse-square town: the courthouse, of course, jail, fire station, post office, city water tower... and a school. Not a one-room little red schoolhouse from 1870, but a school that might appear in a moderate size town in my layout's 1950s transition period. A grade school might have at least one classroom for each grade, a high school maybe 8 or 10. But as always, I was limited on space. *Railroad Model Craftsman* came to my rescue with a construction article and scale drawings based on a Chicago grade school built in the 1920s. It bore some resemblance to the grade school I attended in 50s. But could be a high school for a medium town. Best of all, the modeler who constructed the school for the article in HO had built it as a wedge, with the front wall and part of a side wall. By doing the same thing, I could position the school back against my tree-line scene divider as if it were nestled back in the woods, with more to the school than actually modeled.



I did not relish the job of finding 24 little windows for the classrooms, slicing off extraneous window frames so they could fit closely together, and keeping them all in alignment. But wait! I didn't have to do that. They were all laid out on the scale drawing. I could copy that to my needed size and use a paper print for the windows. This was in the days before we had scanners, computers with graphics programs, and printers. I went to my local copy shop and copied the magazine plan to get it the needed scale. Then I used water color markers to color the window frames and muntins, so they would not be stark white. The orange seemed the closest to the institutional buff-yellow I remembered.

### How I make Masonry in Cardboard.

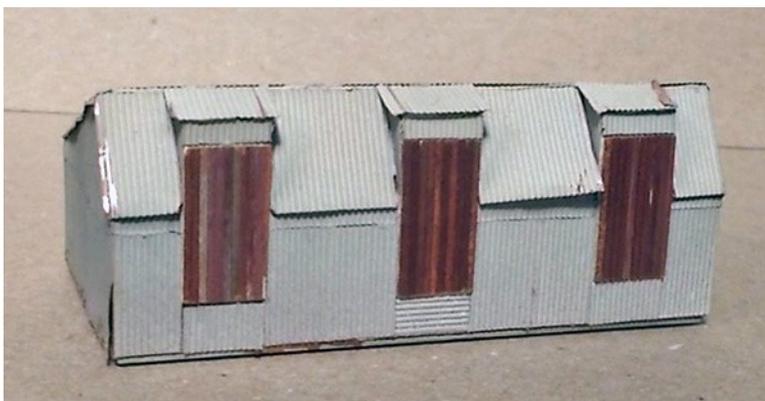
I made multiples of the copy so I could glue one to heavy artist's board for the bottom layer of the building front, and additional copies to put on smaller pieces of artist board to give the facade some depth. I cut and glued Walthers brick paper around the windows, using the photocopy as a guide. Then I cut more pieces of



heavy artist's board for the corners and the central entry so they could stand out in relief, and glued the center portion of a photocopy for the entry area door and upper windows – and added brick paper around them. More pieces of artist board were cut and painted light gray for the lintels over the first floor windows, and for the cornice. Thin pieces of brick paper, only as high as 2 or 3 courses of bricks (I don't remember exactly) were pasted on the quoins (corner columns) and on each side of the central entry. Visible on the left end of the photo and around the entry, not so much on right end. Now for the protruding concentric masonry arches over the entry... I didn't think I could make round cuts in heavy artist's board as neatly and evenly as I wanted. I took one of the photocopies to a hardware store and looked through their little drawers of screws, nuts, etc. until I found some fiber washers that would fit. I cut them in half and painted same as the lintels. The eagle sculpture over the entry was not cardboard. I found it in the sailing ship fitting department of my hobby shop. Several years after building the school, I added the Lumberjack mascot sign. By then, I had Photoshop to draw it on and a printer to print it out.

The yellow-walled building a little left of center in the photo of Johnston, Texas on the previous page was intended to be the warehouse portion of the three-story peanut butter plant behind it. The warehouse was RAILHEAD kit #21 "SUPERIOR TRANSFER" which consisted of scored and cut-to-shape, but unpainted and unprinted cardstock parts for the walls and roof. The kit also included wood to brace the cardstock walls, shingles for the roof, metal door and window, and if I remember, metal castings for turbine roof vents.

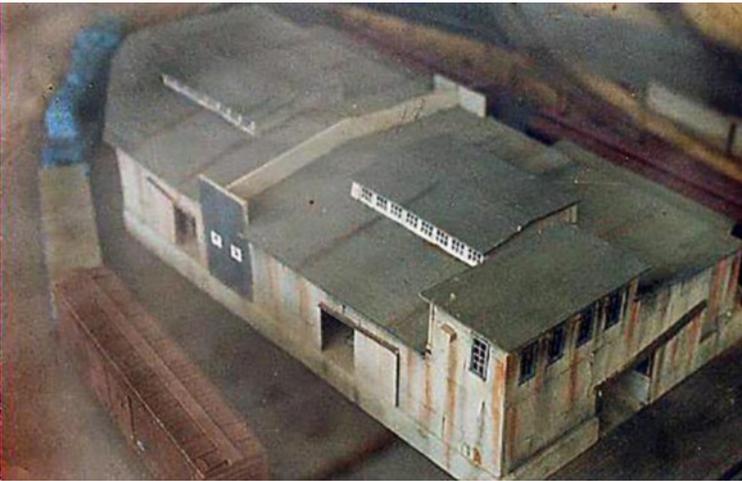
One last "cardstock" model on the East Texas layout. *Model Railroader* had scale drawings for a prototype ag loading shed. I used the plans to build the shell of the building in cardstock and then covered it with Campbell's corrugated aluminum.



Most of my cardboard modeling has been structures, and most in HO and N scale. But I once had occasion to model a diesel locomotive shell in O scale. Back in the 1980s, a model railroad photography contest had given prizes to pictures that not only showed good modeling, but also created effects: smoke, snow, background motion blur, etc. I thought I could manufacture a dramatic fire effect with cotton, colored light and time exposure. A fire scene could tell a story: railroaders pushing a hazardous tank car away from a refinery tank fire before it could go off and flatten the community. Model photography generally works better in larger scales, like O. I had scale drawings for a switcher in a model magazine, and had never considered building a loco shell in styrene or brass, nor in HO or N. I used the drawings to build a shell in cardboard in O scale. I got a junker Lionel FA 027 diesel for the trucks and chassis, and bought a couple Williams O tank cars and a length of Atlas O track. And there was my scene. I didn't win any prizes, but had fun and did something I'd never done before.



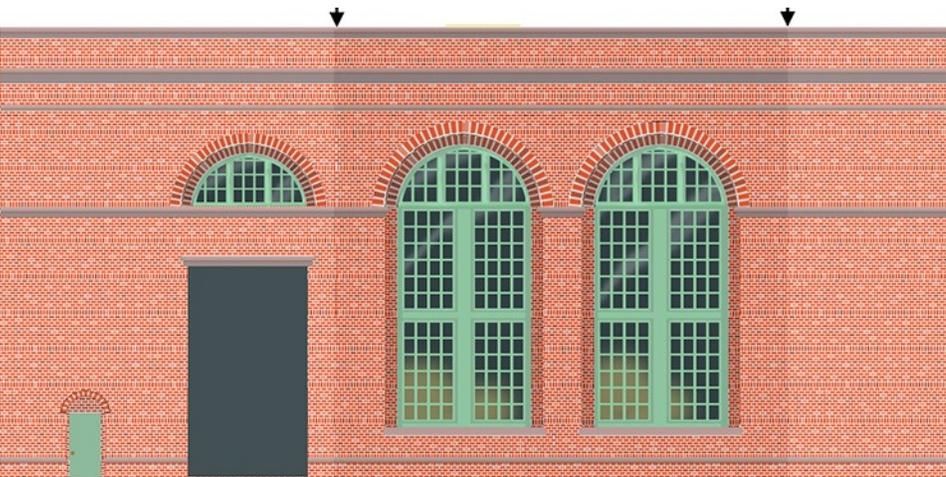
A project for a hobby shop window about 1990 called for a structure that was not cardboard on the outside, not cardboard on the inside, but cardboard in between. A club was building a display layout with limited space, and wanted to suggest some of the kinds of railroading seen in our hometown of Corpus Christi. Some of the transfer sheds at



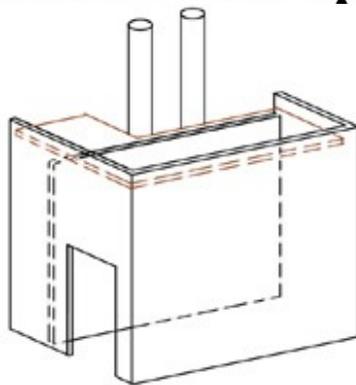
the port had been built with a curved chunk cut off a corner- actually simply built with a curved chunk left off to allow a prototype sharp curve for a switching spur. Just the thing to make an interesting model, and to allow a bigger structure than would fit on the layout if the building were rectangular. A piece of 1x10" shelving plank was cut to length, with a curve cut from one corner for the track. This formed the raised concrete slab for the shed. Interior support columns and roof trusses were laid out in stripwood and glued to the base. Then came the cardboard – walls and roof glued to the trusswork inner skeleton. Finally, Campbell's scale corrugated aluminum was GOOed over the walls, and

sandpaper roofing added to the roof. Cardboard "in-between" the inside and out.

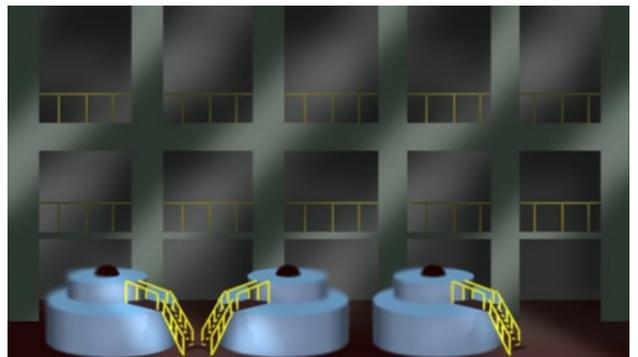
In 2002, I left a 37-year TV job, but I bought myself some computer equipment and photo editing and video editing programs to produce my own TV series. I couldn't sell the show, but the computer opened me up to creating model railroad buildings with Photoshop and printer. It was my first computer powerful enough to go on the Internet where I could share model railroad stuff like I am sharing now. But not only could I send pictures of my trains, I could create entire cardboard buildings and "SEND THEM THROUGH THE INTERNET" by emailing computer .jpg files that my recipient could print out and assemble.



For a teenager halfway across Texas who asked my help designing a layout based on his hometown in the 50s, I drew up the sides for a power plant building to be placed against the background, and a drawing with an inside view to be glued where it would be visible through an access door. I also sent a metric drawing of how to put the building together and a photo of an assembled N scale building posed with a transformer being delivered on a heavy duty flatcar.



When a cardboard building has been created and saved as a computer graphic file, it can sometimes come back in another life, or even more than one. Not reincarnation, but



rein-CARDBOARD-ation. About 2001, I was designing a layout based on Galveston, featuring a huge export grain elevator I had photographed 10 years earlier.



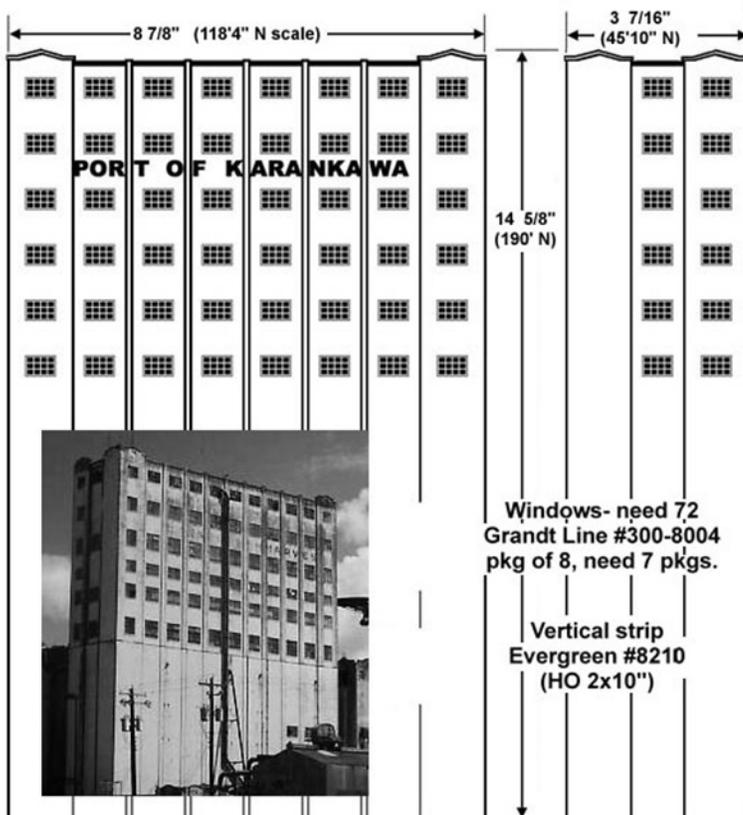
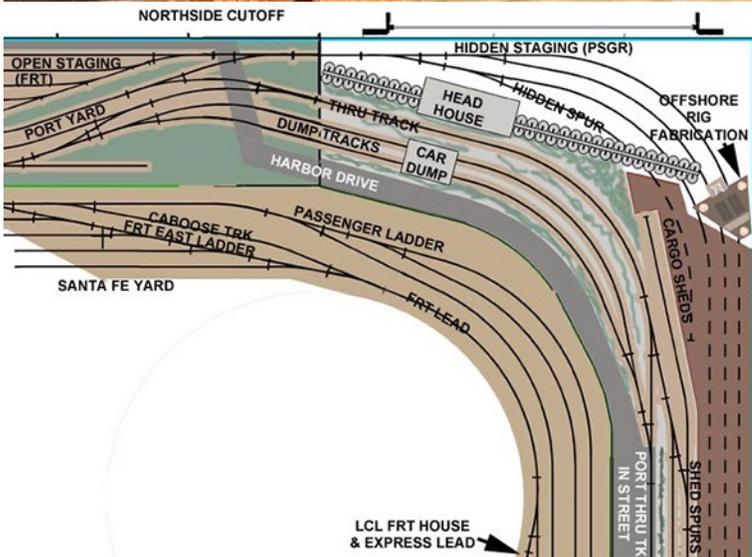
Glad I have the photo, since it was brought down with controlled explosives shortly after I started the project.

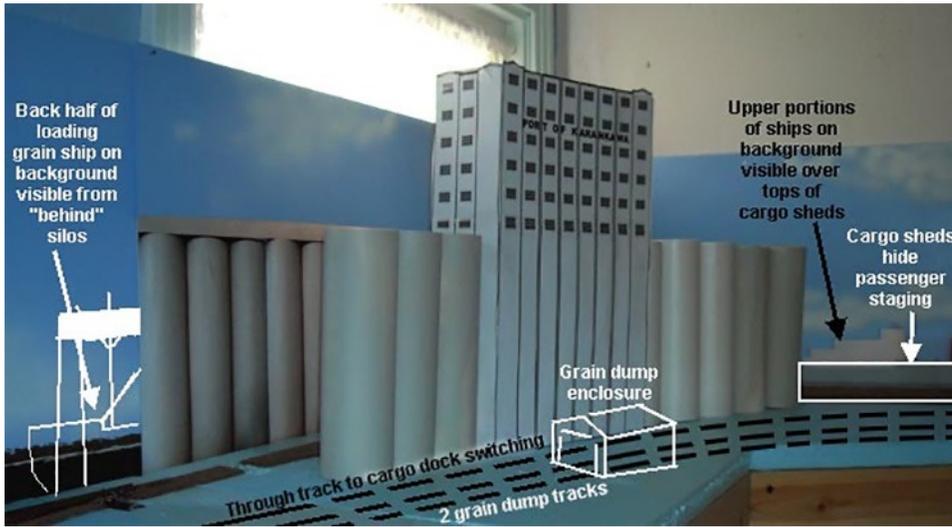
The prototype elevator had rows and rows of silos, and some tracks ran back in between rows of silos. This gave me something I could use for two layout goals: I wanted to have a way for tracks to sneak behind a background or buildings for hidden staging, and I wanted to create the impression of a huge array of silos. I came up with the scheme of making physical models of the head house and one or two rows of silos, with another row of silos as a flat printout on the background.

To this purpose, I worked out a scale drawing of the front of the headhouse, and drew it by hand on posterboard to make a cardboard mockup of the headhouse, with the intention of eventually building a styrene model.

I bought an 8 foot length of PVC plumbing pipe and cut it into lengths for the silos. Now here is the CARDBOARD part. I photographed 3 of the pieces cut for silos, then set them up to print at full size, and printed multiple copies to make nearly 3 feet of background silos.

The cardboard headhouse, unfinished PVC silos and silo background printed out on thin





filing-card-weight stock went up on the layout benchwork before any track. Actually the track never got laid in this corner, but it always looked like “something” with the mockup in place. A couple of tricks about the background. I needed to cover up a room window, but I needed to make the cover removable. I laid the silo background so it came out to the end of a removable piece of styrene, so the end of the removable piece looked like the end of the row of silos, not a sky background that needed to be blended in.



I wanted to give the appearance of a ship being loaded with grain on the channel side of the elevator. I had a good photo of the back half of a ship. I positioned it so the missing portion of the ship would be covered by the silos.

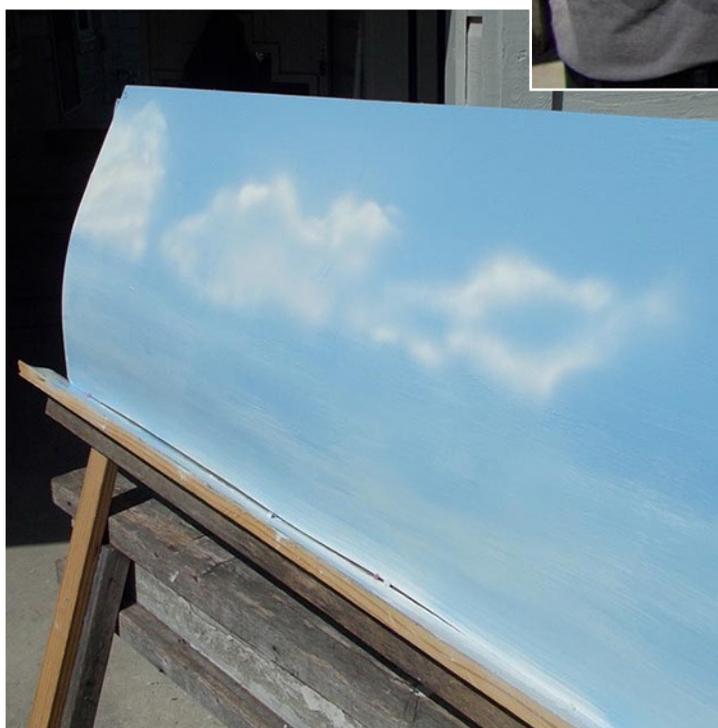
Part of the purpose for a mockup is to see if something works or looks right. After a while, it started to seem as if my silos were too fat. I found some smaller diameter PVC pipe for the modeled silos. The background silos were easier. I simply reduced the X-axis size of the graphic file in Photoshop, printed out new copies and glued them over the old ones. Rein-CARDBOARD-ation!

The grain elevator mockup worked fine, but the round-the-walls layout on which it was placed never came together. It needed a duckunder and was placed at 60” height which required working standing up, and when I got old, it wasn’t right for me. Or maybe it was me not right for it.

I came up with a new smaller lower-level layout with features specifically designed for advancing age. I called it the ELDERPIKE concept. The smaller layout lacked the room to model my big grain elevator, but I had a place that required no space – the background. I converted my scale drawing of the headhouse into a textured rendering in Photoshop and printed it out, along with new prints of the silo background elements. Third lifetime around for the silo prints. Rein-CARDBOARD-ation!



Back in 2014, some friends asked me to put together a tutorial in a Facebook group about how I paint clouds on sky backgrounds. I started to say cloud painting doesn’t have much to do with building cardboard structures, but it does involve cardboard. I saw a live clinic about finding color slides of slides, projecting them on a piece of cardboard and carefully cutting out the shape of the clouds. Me, I simply get a large sheet of inexpensive lightweight posterboard, 50 cents to a buck at the school supplies department of my corner store.



Actually if I have old used posterboard from old track plans, or cue cards for videos, I can use them. Instead of careful cutting, I just tear the posterboard irregularly into a shape that looks like – no, not a cloud, but the EDGE of a cloud. Not straight, but irregular.

I hold the stencil about 2 inches away from my sky background and spray with light passes. I do NOT want a hard edge shape, but a soft edge vague shape. I move the cardboard stencil around to hit different area of the cloud.

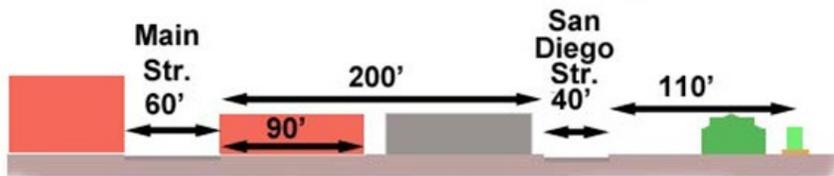
Then I turn it upside down to paint the bottom of the cloud. Sometimes a little light spray without stencil. Freehand. I don't want to fill in the middle of the cloud too much. The sky blue showing through a little just suggests shadow.

And that's about all there is to it. I did this on a 3-foot-wide sheet of styrene for a tutorial, but I have done several layouts, with 16-inch-high 8-foot-long pieces of styrene (cut from a 4x8 foot sheet) on the walls.

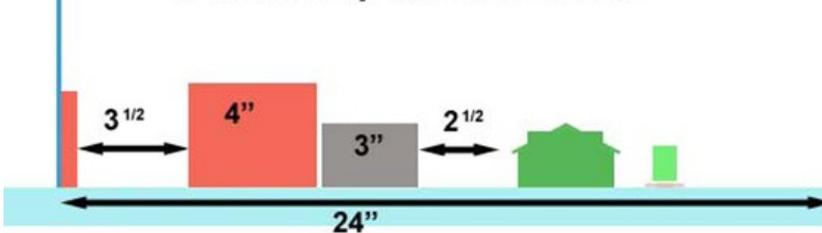
Now on to the main “cardboard” portion of this tutorial. I wanted to show the cloud background with several kinds of scenes. A couple of the South Texas group members live in Alice, where the KCS former Texas Mexican line paralleled the town's main street a block and a half away, with the railroad generally facing on the back of Main Street buildings. I thought that would be an interesting scene to model. It would involve using flat building fronts on a background for the buildings on the far side of Main Street, and whatever buildings I could find in my put-on-the-layout-someday box, for the backs of the buildings on the near side of Main Street.

I remember the kind of Main Street storefront scene I wanted to suggest but I didn't have a photo. I don't have one now to show you, but here is a postcard of a similar South Texas small town Main Street scene.

## ALICE downtown scene- prototype



## ALICE downtown- compressed for 2 foot deep N-scale scene



How do we get that kind of photograph? Obviously, I wouldn't want to shoot it all from one end, with a perspective effect where one end is much bigger than the other (unless I'm trying for some kind of special effect.)

I would shoot with the camera pointed at a right angle to the front of the wall I am shooting. If I can't get the entirety of the building I want to reproduce, I would walk up and down at the same distance from the building or wall, and shoot a series of pictures that could be spliced together, either in a computer editing program or by cutting and pasting cardstock pieces. That's for the horizontal.

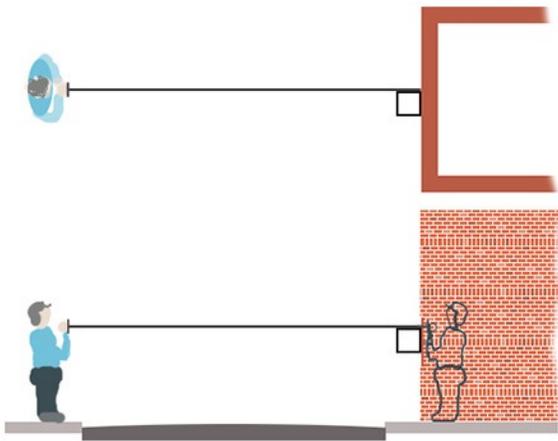
The vertical is not quite so obvious. Most buildings, even one-story houses, are usually well over twice the height of most photographers. If a photographer points a camera (except one with a tilting lens and back) up toward the vertical half-way point of the building, the photo will have perspective distortion – the top part of the structure will be in a smaller proportion than the bottom, and corners that should be vertical will be slanted towards some imaginary vanishing point way over the top of the picture. There are complicated ways to avoid this – using a view camera with bellows, and movable lens and back, or using a perspective correction tool in Photoshop or similar computer photo editing programs. But (trigger warning – just my opinion) those fancy view cameras are for people more interested in cameras than in modeling. And not all modelers have even the “cheap” non-professional version of Photoshop that I use. Even with the perspective correction, I find it tricky to get just right. Better have it straight to begin with.

Notice that this view gives you a good idea of the kinds of storefronts, could be used as a research reference to design a model. But the oblique view would not be useful for printing out a photo to use as a paper or cardstock model. I needed photos made deliberately “flat-on” to the fronts of the buildings. Adjusting the size and scale of pictures in Photoshop, Windows Paint, or in the printer was not much of a problem.

I was in a hurry to post my tutorial and the town I wanted to “suggest” was 40 miles away and I didn't have half a day to go shoot some photos. So I cheated and found a “stand-in,” local business street in Corpus Christi I could get to and photograph in an hour. Not actually a small town main street, but one of the first suburban shopping districts outside the growing downtown area in the 1920s.

## CARDSTOCK MODELING HINT: PHOTOGRAPHY FOR FLAT WALLS

Okay, we want photographs with non-distorted views that can be mounted on cardstock as building flats for a background, or full model buildings.



The way I do that is simply to hold the camera level, so that it is at right angles up-and-down to the building or wall I am photographing, even if that does not center the height of the building centered in my photo. If I have “wasted” picture area at the bottom, don’t worry about it. I can always cut it out. Just so I am far enough back to get the desired top of the building or wall WHEN I hold the camera level. And HOW do I know I am holding the camera level, when my habit might be to tilt it to center the subject? Well I imagine there is “another me” standing over in front of the building I am photographing, with a camera pointed straight back at me. I just point my camera straight into HIS camera and I’m on the level. It is even easier if I am pointing my camera at a storefront with a plate glass window that is in the

plane of the storefront. In that case, I am the camera at my own reflection. If the reflection of my face and figure in the glass makes the picture too ugly, I can retouch it out easier than correcting perspective distortion.

Notice I didn’t say anything much about the scale of the photo. It might be possible to experiment and find out how far back you need to stand to have all your pictures always come out just the needed size. But even if I figured it out, I might not always be able to stand at that distance. When I shot my storefront, I had to stand across the street on the sidewalk. I couldn’t get closer to get a bigger picture area without standing in the street in front of traffic. And I couldn’t get farther back than the fronts of the businesses on the side where I was standing. I figured in advance I would have to adjust the size after the fact.

I usually adjust my photos in “Photoshop Elements” for backgrounds and printed buildings, but not everyone has Photoshop, so I did my demonstration in ordinary “Paint” (not “3D paint”) which has been an included mini-program in the last 2 or 3 versions of Windows I have used.



To get my photo to print out at a desired scale size, I first just print it out “as is” and measure the part of the image I want to scale.

Then I figure how big I want it to be in scale. For building a building, I take the prototype dimension and divide by the scale proportion. Sorry, I did this several years ago and didn’t keep track of my numbers. Just plain arithmetic. If a storefront was 30 feet wide, I would want it 2.5 inches wide for N scale, or for O scale,

7.5 inches, For a background flat, I might want it slightly smaller to farther away in the distance. Like 95% of regular scale size. 2-3/8 inches for N scale or 7-1/8 inches for O scale.

Now how big do I want the digital image to be? I know 300 pixels/inch is recommended for good high resolution photo quality. But I don’t know you really need the highest possible resolution for a background. The focus ought to be on the foreground trains and scenery. So I compromise at 200 ppi. Your preference may differ. My 2-3/8 inches for N would be 475 pixels wide. Somebody else’s 7-1/8 inches for O would be 1425 pixels. For now, just keep the figure you want to use written down somewhere.

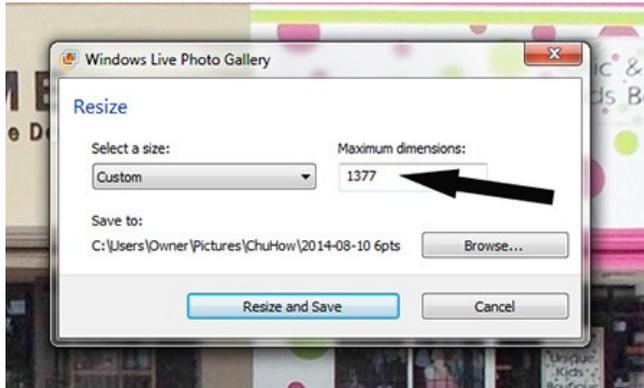
I imported my image into the Paint program, used “select” to pick out the part of the image I want to use, and then “crop”.



I go in the menu to “resize” and it shows me the pixel size of the (now cropped) digital image.

I insert my desired pixel size and print it out. Here I laid a plastic kit part next to the cardstock printout to see if the proportion was right.

I did the same for all the parts of my street scene, glued them up on a heavier piece of cardstock and set them in place against my sky background. If you are following this procedure, just to use it to print out sides for buildings, this is it. But there’s a little more if you are making a background. My street scene row has the buildings, and if you were viewing a model scene with your eyeball right at the layout ground level, this would look right. But layouts are usually viewed from at least a little over the tops of a train. Say, at least 3rd floor level. At that height, one should see something over the tops of 2 story main street buildings. Not the horizon, but something. The tops of trees, utility poles, larger buildings a ways off.



To prepare for adding those farther-back elements, I lightly pencil the top of the storefront strip for reference and positioning.





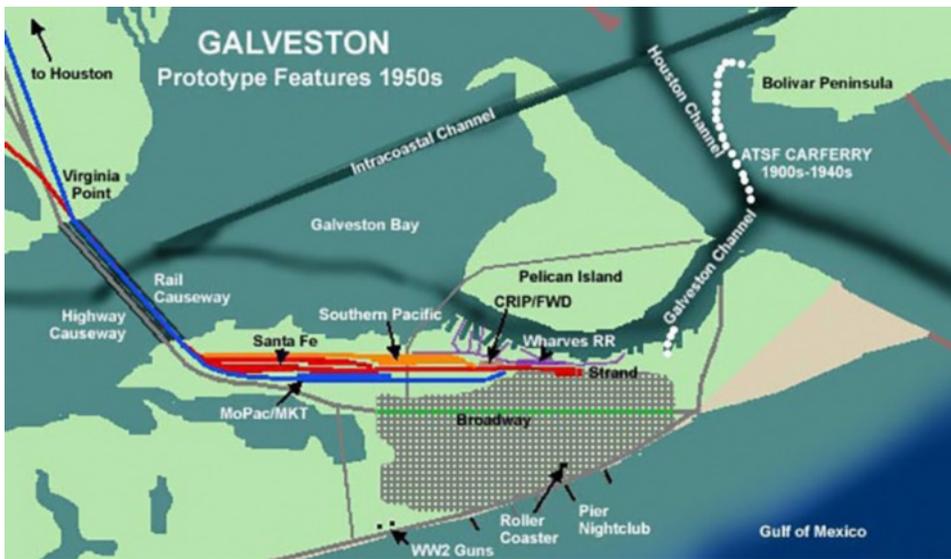
Alice, the town I am trying to suggest, has a county courthouse on the other side of Main Street from the tracks. I found a photo of the courthouse on the Internet, printed it out, cut it out and glued the dome to be slightly visible above rooftops. Then I add the tops of trees – either more computer photo printouts, or foliage patterns dabbled on with a stipple brush or even a little ground foam glued to the backdrop.



Utility poles were drawn with Sharpie marker pen. I wanted telephone and power lines hanging from the poles, and they needed to be sagging in an arc, but a more uniform curve than I could draw freehand. A French curve is good for drawing curves but the one I have does not have a long enough shallow curve. I found a paintbrush whose handle had a shallow curve and used that to draw utility lines with a drawing pencil.

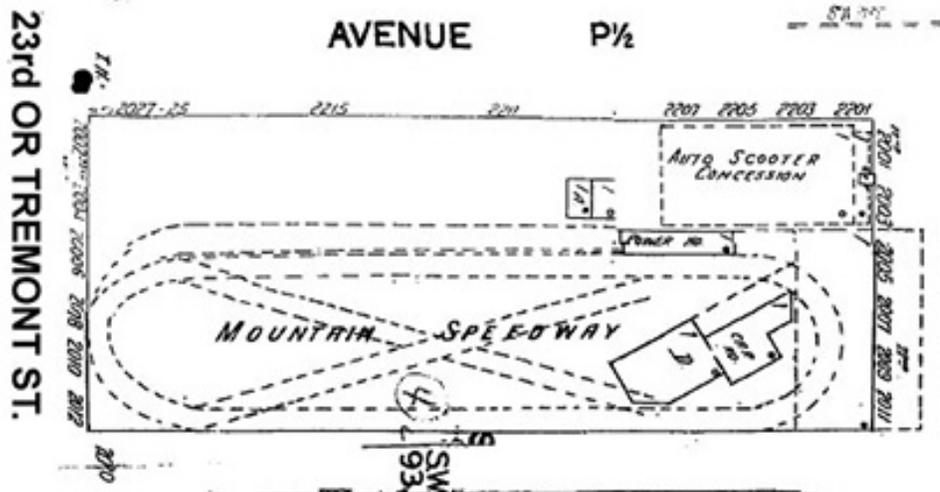


And that gave me my background. I added a few old kits and pieces and a board with a ballasted posing track. This doesn't really show Alice as is looked in 1980 because of the "stand-Ins", but it demonstrates HOW the scene could be built.



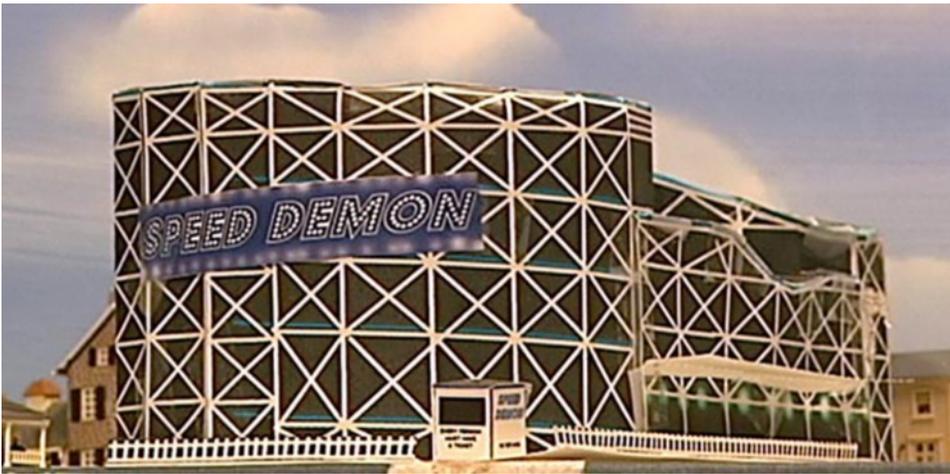
For a layout based on Galveston, I wanted to include a model of an old, ratty wooden roller coaster. The prototype existed from the 1920s, at least through the 50s, a block off the beach, but a mile from the nearest railroad. But similarly off trackside were the beach and the seawall and a notorious nightclub pier, all memorable icons of Galveston. When I was 10 years old, Dad drove by the coaster and let my brother and I look for a minute, but Mother said, oh no, too dangerous to ride. So this is a case of nostalgia for the old times I did not actually get to experience.

I found a corner where a condensed coaster might be squeezed in, and I found historic photos in Galveston's Rosenberg Library archives. They let me have photocopies for research, but NOT for publication or Internet posting. Sorry. I also got a small plan view from a Sanborn map.



Fitting the coaster would require shortening the length, but I could keep the general outline – oval shape with least a 180° turnback curve at each end, diagonals across between the highest end curves with drops, one over the other, spirals farther down on each end at lower level, tangents between the lower end spirals with lower ups and downs. I drew a plan view, but it was clear that the plan wasn't clear, due to 4 or 5 levels of curves right on top of each other. It would take something 3-dimensional to visualize the structure: a 3-D cardboard mockup as a step toward working out details of a stick-built model.

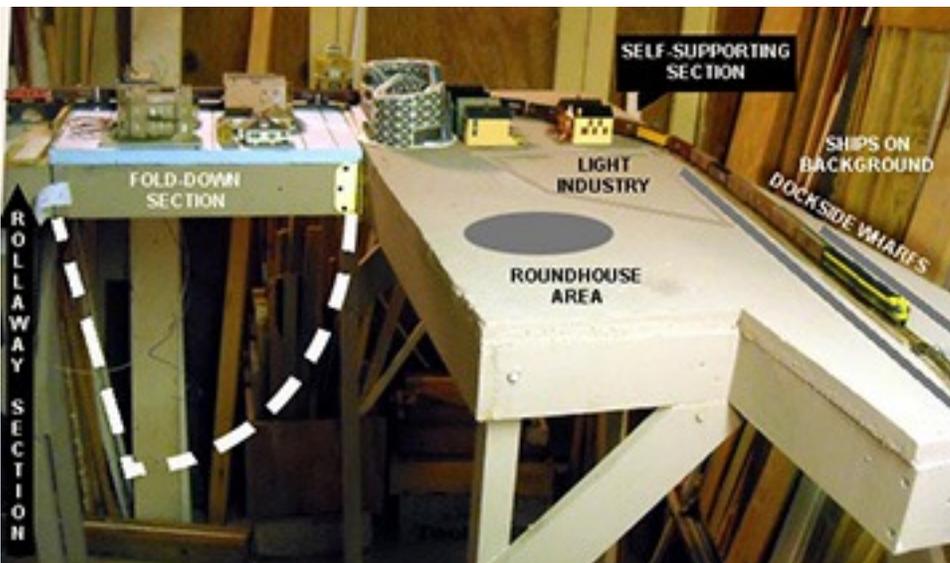
More 2-D planning preceded even the mockup. I drew out a straight line for the twister coaster track, like the straight-line schematic diagram of a multiple lap layout. On top of that, I drew elevations – a lot like the elevation of a railroad line, except that the horizontal down the line was a lot shorter, and the vertical ups and downs relatively higher and sharper and closer together. I started from the bottom and noted places where a track needed vertical clearance to go over or under another track. From this, I was able to draw the way the track would lie along the sides and ends of the coaster. From that, I figured how the framing would need to appear from the sides and ends, and also from the insides of the sides and ends. I used this to draw a "kit" for the cardboard cutout mockup.



I included a sign with the name “Speed Demon”. I wanted something more exciting and daring than the actual name on the Sanborn map, “Mountain Speedway”. Wooden coasters in other parts of the country are named “Cyclone” and “Hurricane”, but no amusement device in Galveston could carry such a name hardly two decades after the city’s 1900 hurricane killed more people than any natural disaster in U S history to this date.



The mockup gave me something to look at, and to hold a place on the layout. I didn’t intend to build the finished model immediately. Backgrounds and track would come first. After I could knock together the basics of the layout, I intended to make a second cardboard mockup with individual cutouts for each “bent” (like the bents of a trestle), but with openings at appropriate places in each bent for a lower track to go through the bent, whose sides would support a higher track. I would test it in cardboard before making so 30 bents – each one different – out of little sticks.



The mockup worked just fine for years and years – as a mockup and place holder. Layout problems



came from the rickety tablework at 60” height above floor, excessive reach across parts of the layout, poor trackwork etc. After ten years without getting the layout to run, I dismantled it for a downsized, sitting-level design with Kato N Unitrack. The new layout didn’t have room for the roller coaster, but it was fun while it lasted.



I was cardboard modeling in 2009 when I was teaching history at Mathis International High School in Mathis, Texas, and teachers were asked to come up with some skill or activity for a non-credit enrichment period. I chose to share structure modeling, which would combine models with a practical use of math to compute scale dimensions.

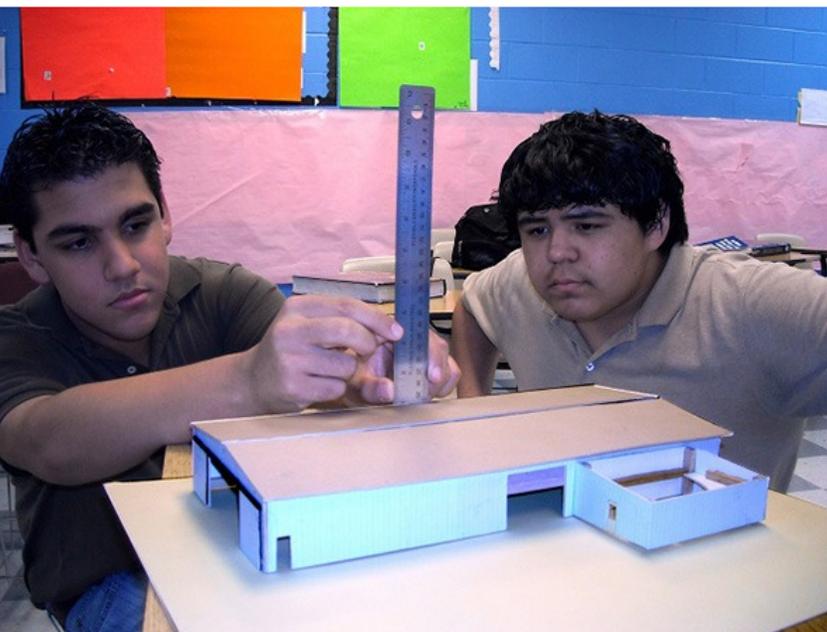
We took a very short field trip – out of the classroom building to the vocational agriculture building, or “barn”.

I took photos and had students help measure the horizontal dimensions of the building. Guess what? It’s easier measuring a building with a tape when two or more people are doing it! A shallow gable roof covered the rectangular steel building, and a couple of metal sheds against one corner broke up the monotony. I printed my pictures on 8½ x 11 plain paper so we could easily write on it.

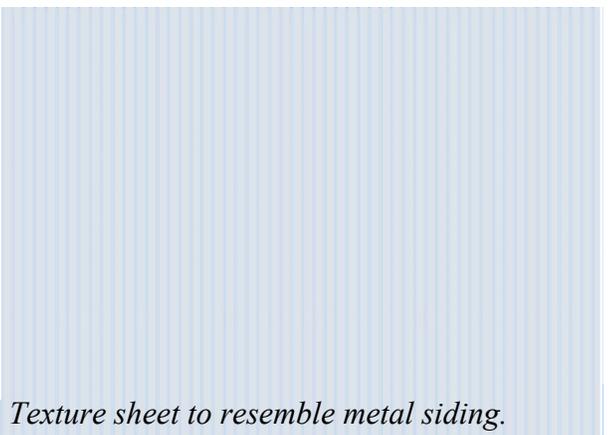
I had students transfer the horizontal dimensions to the paper, measure the lengths of the sides on the image of the barn, and figure how many inches on the photo equals how many feet in full size. Then we could figure the height of verticals without climbing on them. These dimensions went on the paper photo too.

Then students made scale drawings of the sides of the buildings on poster board. None of the students had model trains. I wanted them to be able

to use materials they commonly had, so I had them work in 1 foot actual = ¼” in scale.



To cover the poster board walls, I drew up a texture sheet to resemble metal siding in Photoshop on my home computer (the school did not have Photoshop), printed it out on



*Texture sheet to resemble metal siding.*



filing-card-weight stock, and brought it in for students.

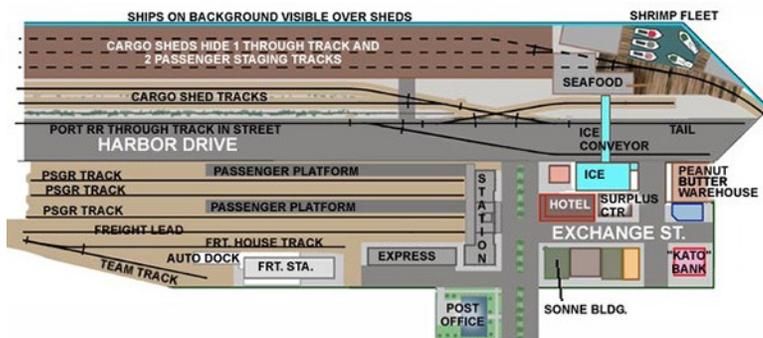
A simple introduction to basic scratchbuilding in cardboard.

## USING AND RE-USING A BACKGROUND



A little digression from cardboard models, to more paper-printed elements for layout backgrounds. I wanted to create a port shipping scene, but even in my previous around-the-walls layout, I didn't have room for a ship model. The prototype however gave me a solution. Ships were visible over the tops of cargo sheds that paralleled the waterfront. Loading tracks paralleled the front of the cargo sheds on the land side. And a road paralleled the tracks, with track in the roadway in places.

This provided a way to compress space in the front-to-back depth of the layout. Ships could be represented with cutout images on the background, visible over the roofs of the sheds. Two tracks could suffice for spotting cars for loading and unloading at the sheds, and an additional track for access to the loading tracks could run in the road. At the same time, the road could provide some visual separation between the port facilities and other railroad, industrial or urban scenes.



I needed a place for a mainline from the port city yard to pass along the waterfront part of the layout without been seen, and I also needed hidden staging for passenger trains that have "left town". Those could be hidden inside the cargo sheds.

An early stage of construction on the scene included "the other side of the channel" on the background (hadn't found ships yet), 3 tracks laid for staging and hidden mainline, part of a roof to span the hidden tracks, made from the backing of a sponge mop refill, and a posterboard mockup outline for the cargo shed front, to be made from walls of a Walther's Brach's Candy Factory kit.



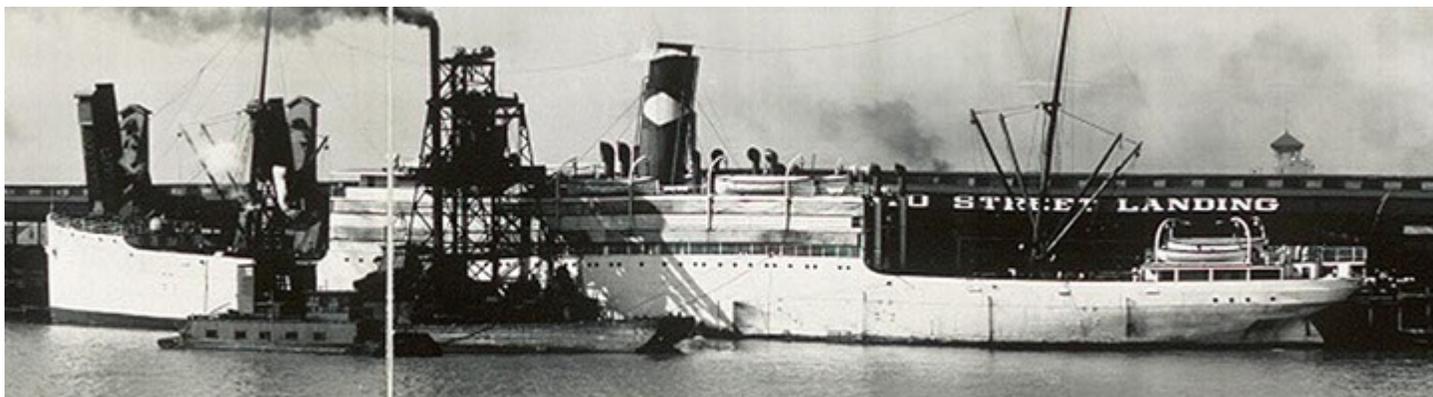
I still needed a ship outline to dock on the far side of cargo sheds, and to represent a vessel large enough to be a credible ocean carrier, I wanted it to look at least 400 feet long. My aim was based on at least a World War II C-1 type, considered small for the 1950s.

My image could be a little smaller for forced perspective, since it is supposed to be at a little distance. I would want it to print at 2-3 feet wide. If I found an image online to use, I would want 240-300 pixels wide, if I printed at 100 pixels/inch. (300 ppi is recommended for photo quality...) And I wanted a view broadside, as if the background ship was parallel to the cargo sheds and tracks. Most of the ship images I found were angled.

(This was not a photo I considered, just one I have rights to display online since it is my own photo. Wrong era ship for a 1950s scene. Soviet ship “Red October” during 1970s Russian grain sale. But it’s an example of angle commonly available that didn’t work for my purpose.)

There were low resolution pictures of C-1 ships, and broadside drawings of C-1s but texturing it to look like a photograph – I haven’t been able to get that to work.

I was interested in banana cargo and I found a 100-year-old public domain high-resolution photo of a banana ship in Library of Congress online. Black and white, pointing the wrong direction, unwanted boat in foreground (tug?). But that would be fixed in Photoshop.

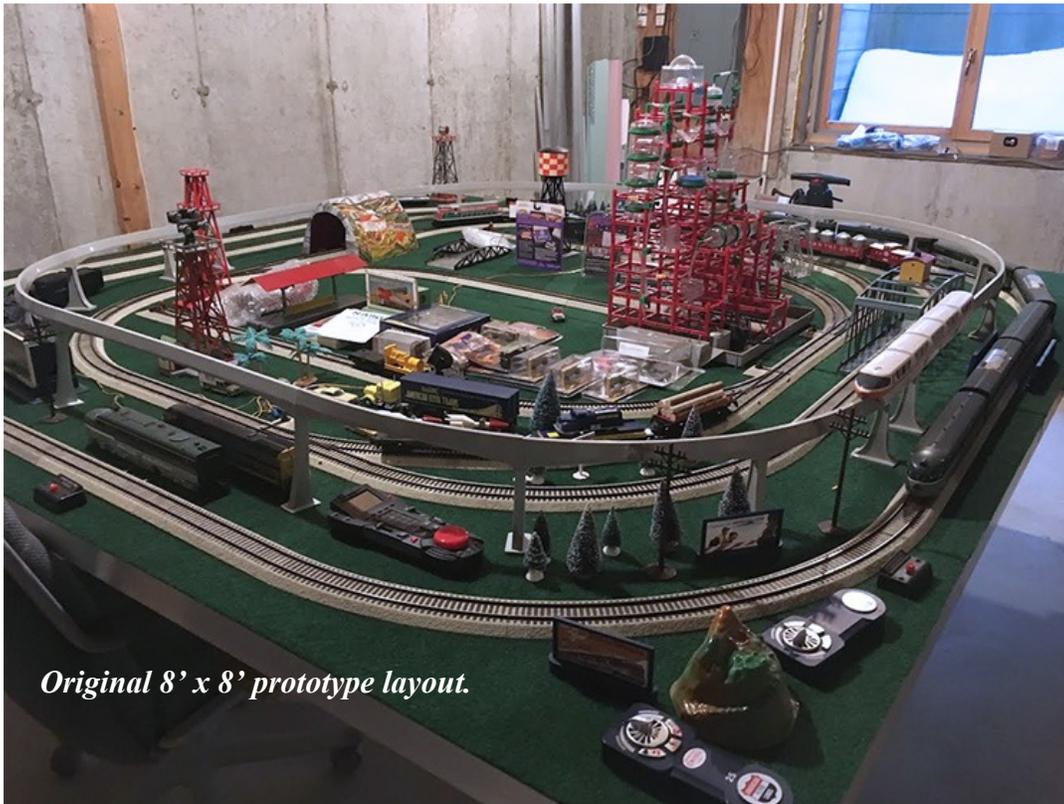


To be continued next issue... It gets even better.

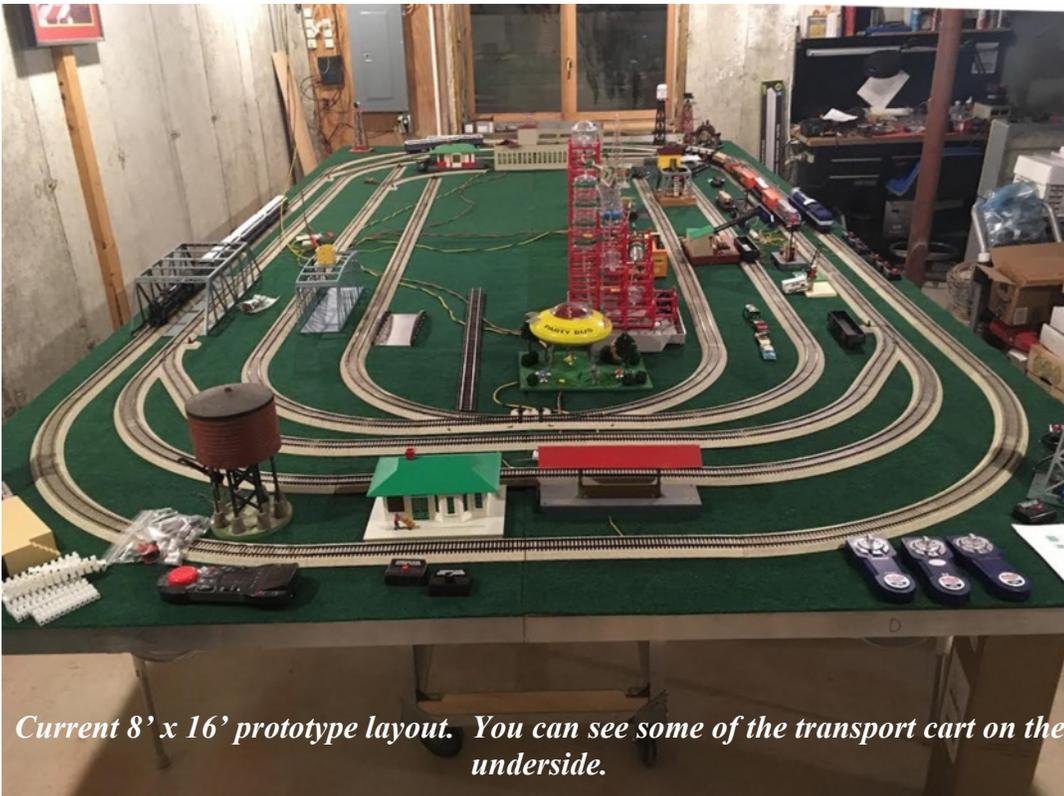
Before I close I want to share an email and photos I got from a reader. It brought back so many memories for me I want to share it with you. Please meet Robbie Tonneberger.

“I saw your article and email address in the *S Scale Resource* magazine.

I am planning on computerizing my 8’ x 16’ American Flyer layout. The layout isn’t typical in that rather than having realistic scenery, I have AF operating accessories that interface with the trains and the users. For instance, I have the saw mill, log loader and unloading car, talking stations, RR crossings, water tank with spout, etc. Each of these accessories were originally designed to either have a push button module or interfaced electrically with the track.



*Original 8' x 8' prototype layout.*



*Current 8' x 16' prototype layout. You can see some of the transport cart on the underside.*

The 8' x 16' layout is composed of two 8' x 8' sections. Each section has two 4' x 8' panels that fold into the supporting cart underneath in case I want to take the layout to a train show. Each of the panels will have a custom micro-controller board that interfaces with the accessories and their buttons or reed switches embedded in the track. Some accessories will also have reed or mechanical switches such that, for instance, it loads only a single log when the button is pressed by a user.

Unfortunately, The trains mostly use either the Lionel Legacy controller or the Flyer Chief controllers.”

Thanks Robbie for sharing your model railroad. Robbie can be reached at [Robbie.Tonneberger@ssca.leresource.com](mailto:Robbie.Tonneberger@ssca.leresource.com).

Well that is it for this “New Tracks” article. I hope you enjoyed it and learned a little. Please follow my [Facebook page "Jim Kellow MMR"](#) so we can stay in touch between articles.

Also, please subscribe to my website [NewTracksModeling.com](http://NewTracksModeling.com) to get log in links to my Zoom and live streamed YouTube events, and be sure to give me your comments, suggestions, and modeling ideas. I so enjoy hearing from you.

Time for me to return to my workbench. Thank you for reading this far. I really appreciate it. As always, best of modeling to you. It really is fun.

# S SCALE SHOWS & MEETS

## 2022 Spring S Spree

May 12-14, 2022

The 2021 Spring S Spree is an all S Gauge Model Train event. This hobby specializes in 3/16" model trains. The 2022 Spring S Spree will be held at the Washington County Fairgrounds 2151 North Main Street Washington, PA 15301.

Annual S scale train show including all aspects of "S" hosted by the Pittsburgh S Gaugers.

Email [info@PSGtrains.org](mailto:info@PSGtrains.org)

Website: <https://sspree.info/>



## O Scale, S Scale, Narrow Gauge West

May 26-28, 2022

Hyatt Regency, Santa Clara  
5101 Great America Parkway  
Santa Clara, California

O Scale – S Scale – Narrow Gauge West is the largest 2-rail O scale convention west of the Mississippi, the largest S scale convention west of the Mississippi.

Email: [info@oscalewest.com](mailto:info@oscalewest.com)

Website: <https://www.oscalewest.com/>



## Sn3 Symposium

### Tentive Information

June 2 through 5, 2022

Sheraton Denver West



## 2022 NASG Convention

August 2nd through 6th, 2022

2022 NASG Convention is announced for Buffalo, NY.

The 2021 NASG CanAm Convention will be held in Buffalo NY, August 2-6 at the Buffalo Marriott Niagara in nearby Amherst. The city of Buffalo has undergone a stunning revival in recent years with its downtown Art Deco architecture, its lakeside setting, and its extensive rail facilities. Mark it on your calendar as a "must-attend".

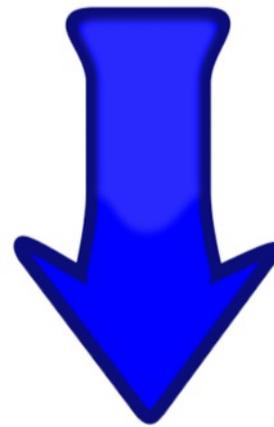
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Yes, we now have a Facebook page to help keep you up to date on new products and ideas. And, even in an on-line magazine, we sometimes have more pictures than we can use, so we'll post them on Facebook.