The Derail

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Thoughts From the President

By Kelly Russell

Christmas is over, hope everyone got lots of trains under your tree. I got to share the joy of the season with both of my kids and the grandkids... the joy of the season.

Now here we are in 2021 – we made it through 2020 – kind of a rough year for most. 2021 may provide us time to look forward… to the "end" of the pandemic with vaccines being released and a new administration taking over in Washington.

Typically, it is also a time for resolutions to make changes – I resolve to complete my Cars AP Certificate by April 1, in time to submit MMR paperwork by the LSR joint convention in Tulsa. Why don't we all resolve to acquire at least one AP Certificate in 2021. The AP program, even with the paperwork requirements, will make you a better modeler.

Upcoming events for San Jac include the Train Show, currently scheduled for April 10. During the last meeting we voted to move the show to late summer, Steve is completing some contract work with the Stafford Centre, but the show will probably be held August 14, 2021 – more to come on that.

The LSR Tulsa Union Convention is being held June 17-20. Think about signing up early to help the coordinators get a feel for attendance. This will be a great opportunity to meet folks from the Mid-Continent region – there will be many new clinics, tours, and layouts to see in Tulsa. The website is up and accepting registrations.

I have been enjoying our recent Sunday San Jac Online Get Togethers and have learned much. 16 people shared during the most recent meeting (12/14). We will be scheduling more of these throughout the year.

We share Virginia's feeling of disappointment having to cancel the decades old tradition of our Christmas party at the Freitag's, but Zoom provided an opportunity to get together anyway, just without the white elephant gifts - hold on to those brass locomotives for Christmas 2021.

For the Jan 5 meeting we will once again hold another hybrid meeting – online and at Bayland. Watch your e-mail for online invitation, or wear your mask and join us.

Stay safe, and follow the simple guidelines: wear a mask, social distance and wash your hands... there is light at the end of the tunnel.

We'll see you at Bayland and online.

Kelly

Mark's Minute

By Mark Couvillion

We have been covering wiring and electrical topics for the last couple of years. I would like to switch tracks and cover rolling stock set-up and performance for a while. Let's begin with **Car Weight.**

Overall Car Weight is one of the primary factors affecting performance. Real railcars are massive, have a lot of inertia, and generate significant momentum when moving. The weight helps keep them on the track and also affects their movement characteristics. Trains start slowly, are handled very slowly, and tend to stop slowly.

The NMRA recommended practice RP 20.1 establishes a weight proportional to car length for all scales that is the minimum for good performance. The recommended practice makes no distinction between "loaded" and "Empty" rolling stock. You can adjust up or down as your specific needs dictate or if the car needs to perform in a certain way. Most rolling stock is manufactured too light. Some cars by their design, especially in the smaller scales, are built such that it is almost impossible to hide additional weight in the car without sacrificing the car's integrity or looks.

What can you use for weight? In HO and the larger scales, ½ and ¼ ounce automotive stick-on weights are a good choice for closed bodies like freight cars, hoppers, and tanks. Some folks use pennies, others use lead shot, BBs, or strip lead. Most manufacturers use stamped steel, as it is not potentially toxic as lead is. Adding metal wheels, metal couplers, and weighted loads help increase overall car weight. Sometimes, little can be done to increase the car's weight to the recommended practice.

I use a diet scale with a dial gauge indicating ounces. When assembling a car I put all of the pieces, wheels, trucks, weights, couplers, chassis, and car body, in the bin and adjust the total weight accordingly before starting. I like my cars a little on the heavy side so I add a little extra weight. I place assembled cars across the bin to check that they weigh what I want them to. Next month: Car Height!

December Minutes Statement

By Dick Louvet

"A motion was proposed by Tom Bailey to authorize Steve Sandifer to move the Train Show to August or later and cancel the current date if there is an opening at the Stafford Centre. The motion was seconded by Gene Mangum and JayC Williams. If dates are not available, the club will decide before the 60 day deadline whether to continue with the Show."

Respectively submitted,
Dick Louvet
Secretary/Treasurer

Realistic Operations on your Model Railroad 41

By Al Partlow

In this installment of our series, we will be discussing an interesting aspect of rail operations, that of "detour movements". We will also touch on other aspects of rail operations that may provide modelers with the opportunity to increase the use of foreign road motive power and other rail equipment on their layouts.

The modeling of detour movements is another means of prototypically operating both the locomotives and trains of other railroads and significantly expanding the variety of equipment normally not seen on the host railroad. All prototype railroads have arrangements with their competitors to operate their trains over other railroads in the event of some situation or emergency that precludes normal operations over their own railroad. Whether it be wrecks, flooding, mudslides, washouts or just scheduled maintenance work, detours occur on a regular basis.

Thus, back in 1905, the American Railway Association adopted a "Standard Form for Detour Agreement" which provided the rules for operations over another railroad's lines. The old saying of "what goes around, comes around" certainly pertains to rail operations, so it behooves rail carriers to have such arrangements to prevent total shutdown of their operations. A request for a detour movement is usually not refused as carriers never know when they will need the favor returned. Amtrak operates detour movements through its contract agreements with the railroads and not through Detour Agreements.

Typically, when a foreign road train operates over another railroad, the train remains intact and utilizes a "pilot" in the cab of the lead locomotive to make sure all of the host railroad's rules and operating procedures are followed closely. This "pilot" may either be a road foreman of engines or simply an engineer or conductor with strong experience on the specific segment of railroad over which the detour movement is taking place. How this may change with the addition of Positive Train Control (PTC) in the future is a subject for another time.

In situations where the host railroad operates with "cab signals" (signals in the cab that replicate the indications of lineside signals), it is necessary to have a host railroad locomotive with cab signals as the lead unit to allow for safe movement in the event of bad weather or burned-out lineside signals. The Union Pacific is a good example of a railroad that operated lead locomotives with cab signals.

If a detouring railroad operated regularly over a railroad that employed cab signals, then they might have several of their locomotives equipped with cab signals. Examples are the Denver & Rio Grande Western which operated over the UP between Provo, Utah and Fontana, California and the Chicago & North Western which also operated over the UP west of Fremont, Nebraska.

Regardless of the area you model, it is pretty much a given that the railroad you model should have detour agreements with other railroads in the area. If you are a Texas modeler, you would have agreements between the Southern Pacific, Missouri Pacific, Santa Fe, Rock Island, Fort Worth & Denver, the Cotton Belt, and the Katy (as applicable) and, as a result, be able to operate the trains of those carriers over your railroad. While not something you would want to do in every operating session, setting up a detour movement from time to time can provide some increased interest to your sessions.

Realistic Operations on your Model Railroad 41

By Al Partlow

Another way to add some variety to your railroad is including junctions with other carriers so as to include another railroad and its locomotives and rolling stock on your layout. Ideally a "live" junction is preferable, as it enables actual switching and interchange of equipment, as well as adding additional operational complexities for the host railroad.

If space or other limitations prevent a "live" interchange, then even a "dummy" junction and interchange track will at least allow you to display some of that foreign road motive power and equipment that otherwise remains in storage boxes. You can also include some structures specific to the other railroad which also makes for a more interesting modeled scene at the junction.

Include a detour movement in your next operating session for more variety and challenge for your operators. If you do not have one, give some thought to setting up a junction and interchange with another railroad in the area that you model for increased operating enjoyment.

Rock Island freight train on detour movement over the T&NO near Navasota, Texas.

Photo by Al Partlow

Santa Fe freight train on detour movement meeting T&NO freight train at Hempstead, Texas.

Photo by Al Partlow

Modeling Age – Part 1

My grandsons and I were converting an old boxcar into a shed on their N scale layout when Lucas, the youngest, told me: “Grandpa, we need to make this look old!” He loves weathering things, so I let him have at it!

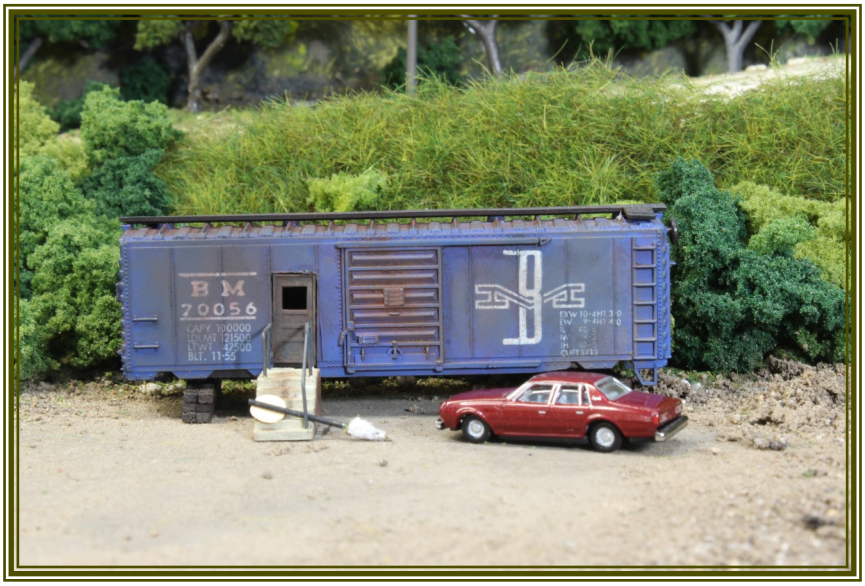


Figure 1 - Lucas used Pan Pastels to add some dirt and grime to an old boxcar converted to a shed. He added the old road sign and car to complete the scene.

My grandson’s comment got me thinking of how we try to make our models and scenes look old. How we model age. In this 2-part series, I will explore some of the materials and techniques I’ve learned to impart the effect of age on my models. These are by no means my ideas, just things I’ve learned over the decades of model railroading. First, we will look at how to add basic weathering.

New models tend to have an unrealistic shine that is rarely seen in the real world. Painted surfaces dull quickly when exposed to the elements. To eliminate the shiny look, give the model a quick coat of one of the clear matte sprays available.

Figure 2 - Clear Matte sprays will eliminate unrealistic shine. Be sure to use these in a well-ventilated area!

Dirt and grime are everywhere outside, and especially near railroads. Besides the exhaust from locomotives and industries, the wind kicks dirt in the air that settles on everything. Rain and snow move it around and down creating streaks. A wash of diluted ink will add a layer of dirt and grime. It can also highlight any built-in details. There are commercial mixes available or you can make your own by diluting ink with alcohol.

Figure 3 - A wash of dilute ink can simulate the dirt and grime that settles on everything. It helps to made different dilution ratios to add variety.

Adding a layer of dry weathering material gives the model another variety of dirt, grime, and surface rust. It can be brushed or rubbed onto our models in all the right places. This should be done in layers to build up the effect. Once satisfied, a coat of clear matte spray can protect the finish.

Figure 4 - Dry weathering media is an easy way to add a layer of dirt, grime and surface rust. Shown here are artist chalks, AIM weathering set, and a good assortment Pan Pastels. They all are effective in weathering models.

Back to the Bench

By Pete Leach MMR

Metal surfaces tend to rust over time. Edges and seams will rust quickly. Acrylic paint is a good way of aging a model by adding rusty areas. Dabs or streaks of various colors can be applied to a model to represent rust or grime on any model. There are many sources of paint, including standard artist and model acrylics.

Figure 5 - Model acrylic paints were applied to represent rust streaks along the seams on this DT&I boxcar. It sits on a siding on my grandsons' N scale layout.

Painted metal surfaces go from dull to faded as it is exposed to the sun. To simulate faded paint on a plastic model, first add any rust or stains desired on the finished model. Next, spray the model with Testors Dull Cote (I have not tried other brands of matte spray.) When dry, lay the model on a flat surface with one side facing up. Spray with Isopropyl alcohol to wet the surface. Allow it to dry completely. Repeat on all sides. The alcohol leaves a whitish surface resembling faded paint. If not satisfied with the look, simply spray with another coat of Dull Cote.

Figure 6 - Before and after photos of GT 85-ft Boxcar. A coat of Dull Cote was followed by Isopropyl alcohol to give the look of well faded paint.

These are all basic weathering methods that can be used to model the effects of aging on any R-T-R or finished model. Next month I'll show you how I include aging into the plan build on models. Until then, I am headed Back to the Bench.

Pretressed Concrete Girder Railroad Bridge

By David N. Currey

Prestressed concrete girder bridges are everywhere, and are probably currently the most common type of bridge constructed for both railroads and roads. For example, I believe all the bridges that were replaced on the Macaroni line in its reconstruction were replaced with concrete girder bridges. The use of concrete in railroad bridges goes back a long ways. Originally, concrete bridges were poured on the spot. Such bridges included arched viaducts like those on the Delaware, Lackawanna, and Western and other mostly eastern railroads.

Pouring concrete mix at a bridge site can be quite a task. In the mid part of the 20th century, engineers began experimenting with concrete slabs and girders that could be manufactured efficiently off-site and then transported to and placed in position at a bridge site. In 1954, a new type of concrete span was installed in a bridge on the Chicago, Burlington, and Quincy Railroad in Missouri. It was a short prestressed concrete span. These types of spans have steel rods in the bottom of the girder that are stretched in the molds before the concrete is poured. Then after the concrete has been poured and hardened, the rods are cut loose, which compresses the concrete, thus placing the concrete in the bottom of the girder in compression. This gives the girder a slight arch in the middle. The upward force thus created along the length of the beam counteracts the service load. This strengthens the girder beyond that of normal steel reinforced concrete. Since the girders are stronger, they can therefore be lighter. Transportation of these girders are reasonably easy, and I'm sure just about everybody has seen trucks hauling such girders.

I wanted a new modeling project to get interested in. My Texas and Louisiana Railroad has several crossings of the Medina River and other such small rivers and creeks, so I needed a span of about 140 feet. I chose a concrete girder bridge, partly because I have not scratchbuilt such a bridge yet, and I want several on my layout. Also, concrete girders give a railroad a modern progressive look, which is what I was aiming at. Also, by having several bridges of the same design on the layout, it not only give continuity to the layout (as on a real railroad), but speed bridge construction, because I only have to design one bridge.

First, I consulted several books I had on railroad bridges, but the information in the books was scant concerning concrete girders. I eventually found enough additional information on the internet to design my own bridge. I also made a trip up to Conroe to measure the ATSF bridge over the San Jacinto River--a long concrete trestle, and a trip up to Tomball to check out the walkways on a metal girder bridge on the old B-RI. The Conroe bridge was very interesting, and I've decided to eventually build a bridge based on it, but it is not a concrete girder bridge. While it would be considered a concrete beam bridge, it is of the slab type instead of girder--designed to replace a wooden trestle. In fact, you can still see the old wooden pilings under parts of the bridge, and the concrete slabs have 28-foot spans--evidently exactly twice the length of panels in the ATSF wooden trestle that previously existed on the spot. Having the new spans exactly double the length of the old wooden spans means the new bridge's piers could be installed beneath the old bridge while it was still in service. Then when all the new piers are installed, the line was probably shut down for a day or so while the new spans (slabs) were put in place. Possibly, portions of the new bridge might have been installed while piecemeal while other parts of the old bridge were left in place.

Eventually, I found a good photo of an early prestressed concrete girder bridge built in the Dallas-Ft. Worth area near Arlington in 1959. One of the first complete concrete girder bridges in the country, it

is still in use today. It was constructed for the Great Southwest Railroad, a brand new start-up line that was built to provide rail service to industries in the Arlington and Grand Prairie area. A year after it was built, the MP and the CRI&P bought controlling interest, and it connected each railroad's line in a north-south fashion midway between Dallas and Ft. Worth. Eventually, the CRI&P hit hard times, and the MP bought out the CRI&P's share. It is now part of the Union Pacific, and though parts have been abandoned, those still in use see approximately daily service to the industries it serves over this very bridge.

The bridge I've designed is based mainly on this Great Southwest bridge, though it is not exactly the same. The GSW bridge was built to an E50 rating, but I needed something heavier for use on a Class I mainline. I've taken the GSW bridge design, and modified it to produce a bridge that might be found over a waterway in the Texas Hill Country and many other places in the state or virtually anywhere. It would also be suitable for spanning a highway. My bridge has three spans. All three spans are shorter than the GSW spans. This in itself raises the E rating of the bridge to somewhere in the E65 to E72 range. I don't know the engineering calculations necessary to determine the actual rating, and I could not find a chart anywhere that stated what length and size girders to use for a given E rating, so I'm just making semi-educated extrapolations from a known prototype.

Notes about the drawings: The “scale” is two pixels to the inch. Lines delineating the various bridge faces and angles are 3-pixel-width lines. All measurements should originate from the middle of the center pixel in a line, just as if it were a pencil line. Concrete sides of the bridge that are perpendicular to the viewer's viewing angle are a medium tan color. Sides that are angled in shadow are a darker tan color. Sides that are angled upward (i.e., would not be in shadow) are a lighter tan color. Metal parts of the bridge are a slate gray color, while the track and tie plates are a rust color. This should make it easier to get a three-dimensional idea of what the various bridge parts look like.

The GSW spans are 67 feet long Type-C girders. I've used Type-C in my bridge for the two short approach spans, but mine are only 40 feet long. For the central main span, I used a heavier Type-IV girder that is 60 feet long. This is still shorter than the GSW spans, so I'm sure this is probably close to an E72 rating--maybe even higher. (I don't know why the Type-IV girder is called that. It would seem logical to name it the Type-D to go in sequence with the smaller Types A, B, and C that increment up to it. Maybe the person first designing a girder gets to name it--sort of like the discoverer of a star gets to name the star, so maybe we're lucky it wasn't called the Type-Betelgeuse or Type-Funky Chicken girder or something.)

Since the spans use two different types of girders with different heights, this made the design more complicated, but of course, more fun. Most of the complication is in the piers. Another difference my bridge has with the GSW bridge is it has a walkway, whereas the GSW bridge does not. Mine also has a deeper channel (15”) for ballast, typical of many ballasted deck bridges, though 12” channels are commonplace. Particularly on a mainline, the extra 3" of channel gives track gangs more leeway on the exact elevation of the track in the ballast.

My bridge probably has abutments that differ from the GSW bridge. I couldn't find photos showing the GSW abutments, so I just came up with something. I've actually drawn two types of abutments. One type has the wings extending parallel with the track and *towards* the river. This is contrary to what the books say an abutment should do. The ATSF San Jacinto slab trestle (as well as a similar bridge on the Cane Belt near Bay City) has such abutments, and after studying them, they seem a valid type of abutment for such a situation as fording a river, where having ballast cascade towards

the distant waterway is no more problematic than ballast cascading down the roadbed contour. This type of abutment takes less concrete to make. It is also advantageous for model railroads, which typically have narrow right-of-ways. If your bridge were crossing a highway, you would not want ballast falling off towards the roadway, so an abutment such as the other one I've included would be more appropriate.

With the parallel winged abutment, the abutment end of the girders are essentially sitting in a trough, with the ballast sloping towards the water or roadway outside the wings, and actually being higher than the ends of the girders at the girder support points. Taking this into consideration, it would seem more bridge is needed to span a given width than with a normal abutment. So though the abutment is perhaps smaller, more bridge is needed, so any cost savings from the smaller abutment is probably lost with the extra length of bridge needed. Perhaps a bridge design engineer could further clarify this situation. There must be some benefits for this type of abutment, or the ATSF would not have put them all over south Texas.

My bridge's piers will not be in water except during flood stage on my future model railroad. However, I found photos of nearly identical concrete piers on several other railroads' bridges that *were* in water, so they are appropriate for such a situation.

I designed my bridge with a walkway only on one side. The Tomball B-RI bridge had 3' wide walkways, which seems to be the norm. Its stanchions for the handrails were simple 2” angle steel that were 3' 6” tall. The “railings” were actually moderate gauge steel cable. Small diameter pipe is also suitable for railings. I designed my bridge with 3” steel or aluminum pipe stanchions and 2” pipe railings. That's a little on the heavy side, but hey(!), we're the Texas and Louisiana! We don't build those flimsy wire railings some railroads scrape by with. Some bridge walkways have 3' tall railings. I split the distance on railing height, and made mine 3' 3” tall above the top of the walkway, which was an aluminum alloy grating type material on the B-RI bridge. I'll probably use some catwalk or freight car roof walk material to construct my walkway.

Some ballasted deck bridges are 12' wide overall (less the walkway) like the B-RI Tomball, and others are 14' like the ATSF Conroe. The walkway is usually positioned outside this 12' or 14' width. My bridge is 14' wide, but my walkway extends onto the 1' wide lip of the bridge ballast channel. I did this mainly for strength considerations in the model, since walkways are usually the most delicate part of a bridge model. With the walkway glued to the top of the lip, it will therefore overhang only 2' instead of 3'. This makes my bridge have a walkway the same distance from track center as a 12' wide bridge, even though it is a 14' wide bridge.

If you desire a bridge without a walkway, simply make both sides of your bridge the same as the other side of the bridge that doesn't have the walkway. However, such a bridge longer than a hundred feet or so should have setouts every so often. If you want a really modern looking bridge, put walkways on both sides. (For the time period I'm modeling, walkways were generally not included in a bridge unless it was in a switching area. If it was, the walkway was positioned on the side where the switch stand was. If there were switch stands on both sides of the track, or reasons a trainman might need to walk on either side, then walkways were put on both sides. Walkways were an added expense, and weren't installed unless necessary. Nowadays, with OSHA, et al., they install more walkways than they used to. Heck, I think even some walkways have walkways. (JK! You may recall my story about a Kingsville Division train that ran out of fuel and we stopped the headend before it coasted onto the Colorado River approach trestle. The trestle did not have a walkway because there was no

siding or industrial spur nearby. We didn't want to be stuck on the trestle in case we had to walk a mile back to the road to get in a limo.) If your bridge is situated in a part of your layout where it might get bumped by fingers, you might want to dispense with the walkways regardless, or at least put them on the side of the bridge away from the aisle.

I've drawn my bridge deck with a flat bottom for the ballast to rest on, but in reality, such a bridge would probably have a center line about 1 1/2 inches higher than shown, with the bottom sloping away from the center on both sides for drainage purposes. Since this aspect of the bridge will be undetectable once it is ballasted with track, and complicates the bridge building and track laying, it is not worth modeling, unless you just simply want to make your bridge exactly prototypical. My span is designed with the 1 1/2 inch drain pipes sloping towards the inside of the bridge at a 45 degree angle so that water drip stains are not found on the outside of the beams. These drains are spaced about every 5 feet. The ATSF slab bridge at Conroe has drain slits on the sides every 7 feet, with water stains below the slits. This is an interesting option if you want to weather a bridge that way. My further thoughts on the matter are that my railroad is a forward looking progressive railroad that is ever mindful about its public image, and so wants its bridges to look handsome and not be subject to water and rust stains dripping down the sides, which the public might derogatorily attribute to sloppy maintenance, though there is absolutely no safety isse involved.

These plans can easily be modified for longer bridges by simply adding more spans. The bridge could be made taller, though if it is much taller, you will need more approach spans to the central span, and possibly different piers that flare out away from the track center line towards the bottoms of the piers.

I've carefully analyzed my bridge, and it is my opinion that all the sizes of the girders and piers are reasonable and appropriate. You could probably make small alterations in the lengths of the spans, especially if you need spans of different lengths. If you deviate too far from what I have here, though, you run the risk of making a bridge that is out of proportion and possibly unsafe. To my eye, my bridge looks pretty sturdy, so the spans could probably be lengthened some if you desire. Making the bridge a little sturdier with shorter girders is also reasonable. However, making the bridge with grossly oversized parts for the length of spans involved will result in a caricature of a bridge that few people will find realistic.

With my two different sizes of girders, I needed a footer to set the smaller type C ones on atop the pier in order to make the girder support surface even with type IV. If you don't need a big center span, and your bridge has all the same type girders as in the GSW bridge, you can dispense with the footers.

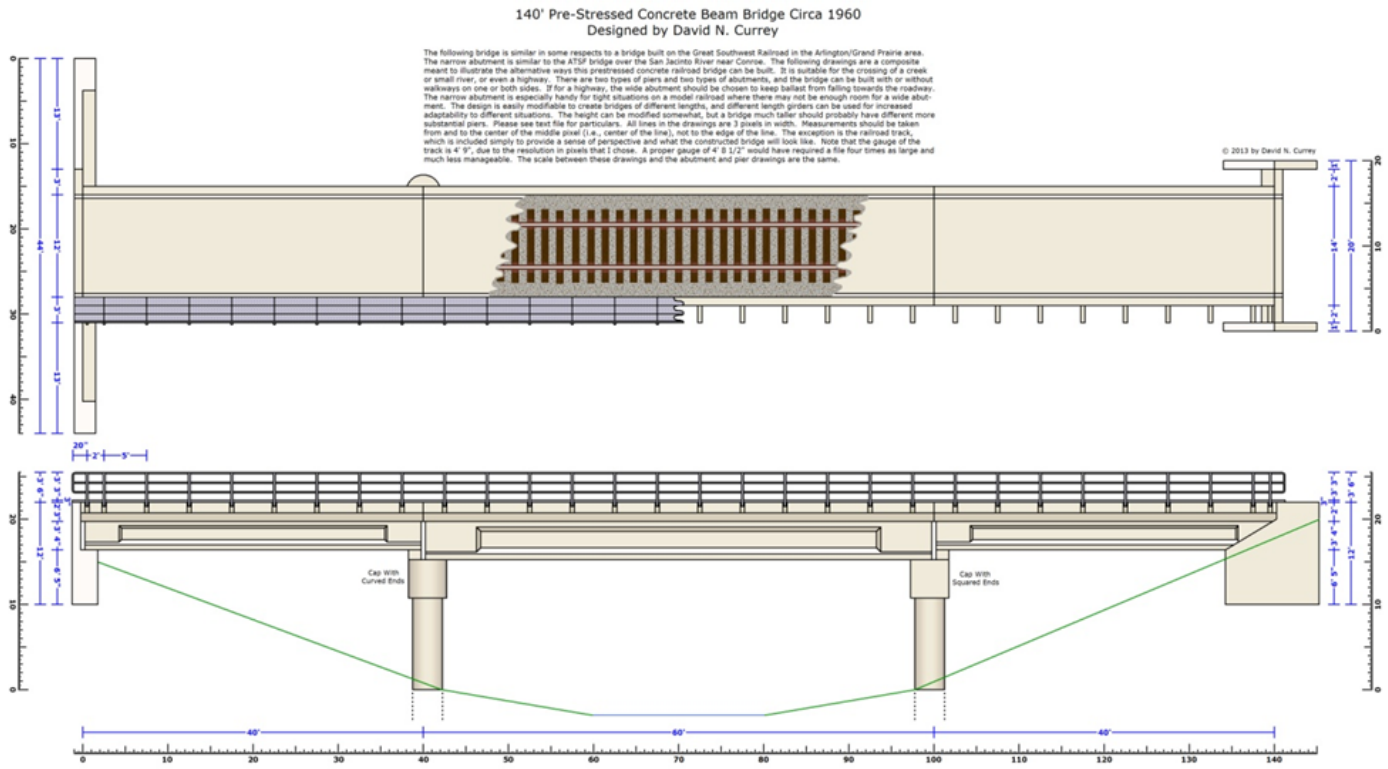
I plan on building my bridge from styrene, as there are all kinds of shapes available. You could make a girder from styrene, and then make a mold and pour your girders from plaster. It might be wise to put steel rod in such a girder for strength. Or you could mold them using polyurethane. Plaster is easy to make look like concrete, but I enjoy the challenge of making styrene look like various other materials, so even my piers will probably be made of styrene. One reason to make the piers out of styrene if you build the girders out of styrene, is that if there is even the slightest coloration differences between the girders and piers, it will spoil the effect, and it will be easier to make the piers and beams match in coloration if they are both made of the same material. In truth, the piers poured on the spot might be a different color from the beams poured at a plant miles away, so having different colors in the various concrete parts might even be prototypical. Sometimes, though, even if

there is a prototype for something, it might not look realistic in a model.

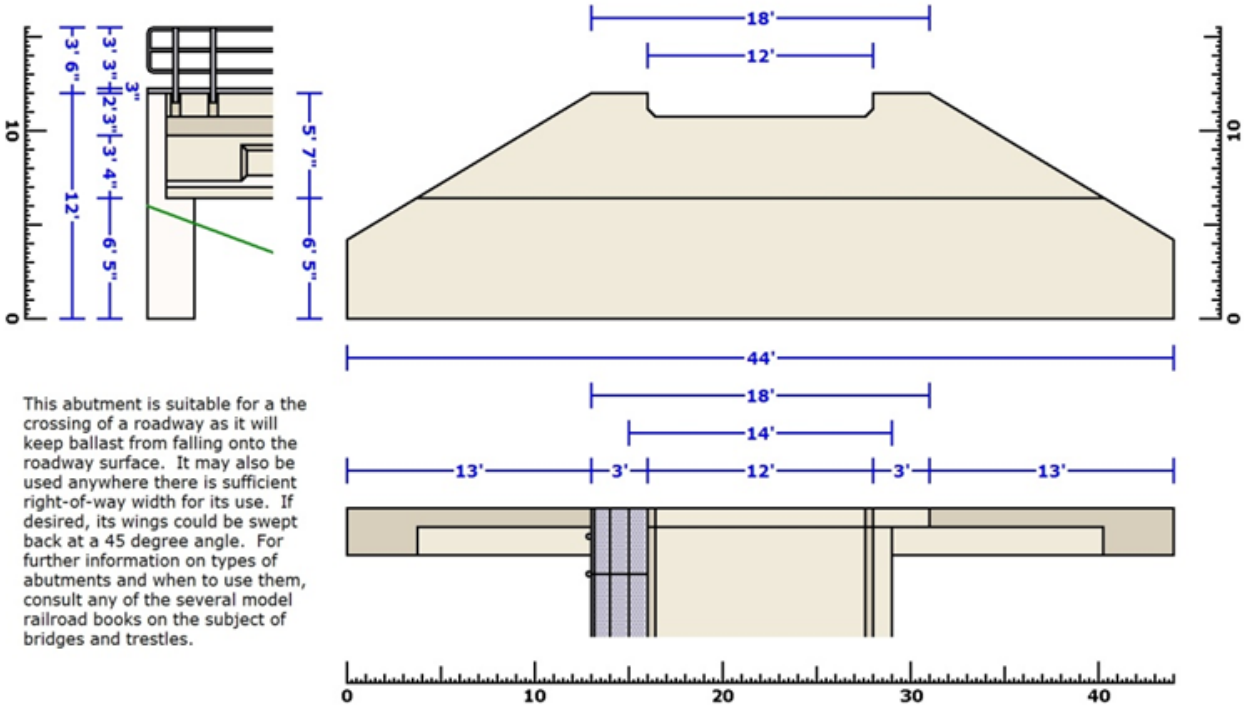
One last thing. Even though the GSW bridge was built in 1959, it still looks modern to me. Most bridges nowadays being constructed with concrete girders do not have the ends of the girders squared off like I have drawn them here (and like the GSW bridge has), i.e., the profile of most modern girders is the same at each end as it is in the middle. I couldn't find out on the internet why that is. I did find a Vietnamese bridge building company that currently makes girders with squared-off ends, and I found photos on the internet of such girders still being installed, so they must still be manufactured by some companies. I consulted Bob Barnett and he says the squared-off ends were done for esthetics and serve no purpose otherwise. So if you are modeling an older bridge from before twenty-five years ago or so, squared-off ends are appropriate--if a modern bridge, you can dispense with the squared-off ends.

Enjoy the plans. Please let me know if anybody builds a bridge based on my design. If you do, you should enter it in the San Jacinto train show modeling contest and/or the LSR convention contest. Disclaimer: Please note that I am not responsible for any bridge failures that happen on your model railroads, unless of course you pay me to build your bridge. I stand behind my work. My going rate is $1,000.00 per linear scale foot, not to exceed G scale in size, nor be smaller than Z scale. If the bridge is in mountainous terrain, it is subject to as much as a $25,000.00 surcharge. Thanks.

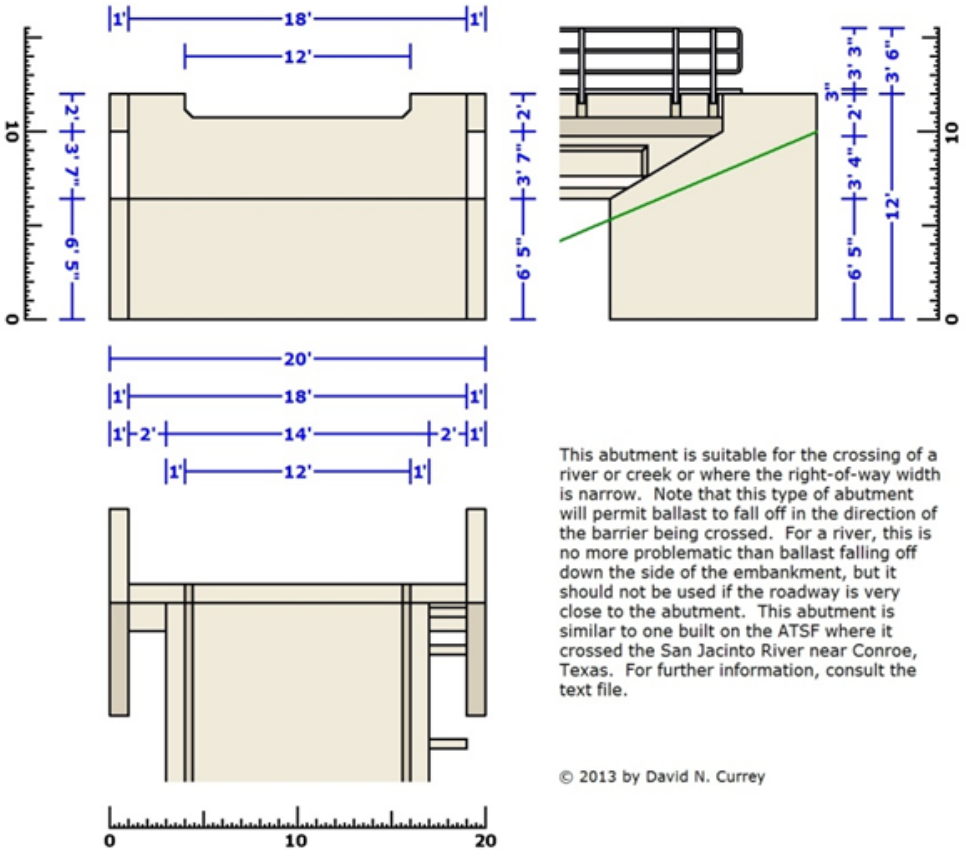
Let's make tie-up at 7:57 pm. Have a good 'un, and get your rest.



140' Pre-Stressed Concrete Beam Bridge Circa 1960
Designed by David N. Currey



This abutment is suitable for a the crossing of a roadway as it will keep ballast from falling onto the roadway surface. It may also be used anywhere there is sufficient right-of-way width for its use. If desired, its wings could be swept back at a 45 degree angle. For further information on types of abutments and when to use them, consult any of the several model railroad books on the subject of bridges and trestles.



This abutment is suitable for the crossing of a river or creek or where the right-of-way width is narrow. Note that this type of abutment will permit ballast to fall off in the direction of the barrier being crossed. For a river, this is no more problematic than ballast falling off down the side of the embankment, but it should not be used if the roadway is very close to the abutment. This abutment is similar to one built on the ATSF where it crossed the San Jacinto River near Conroe, Texas. For further information, consult the text file.

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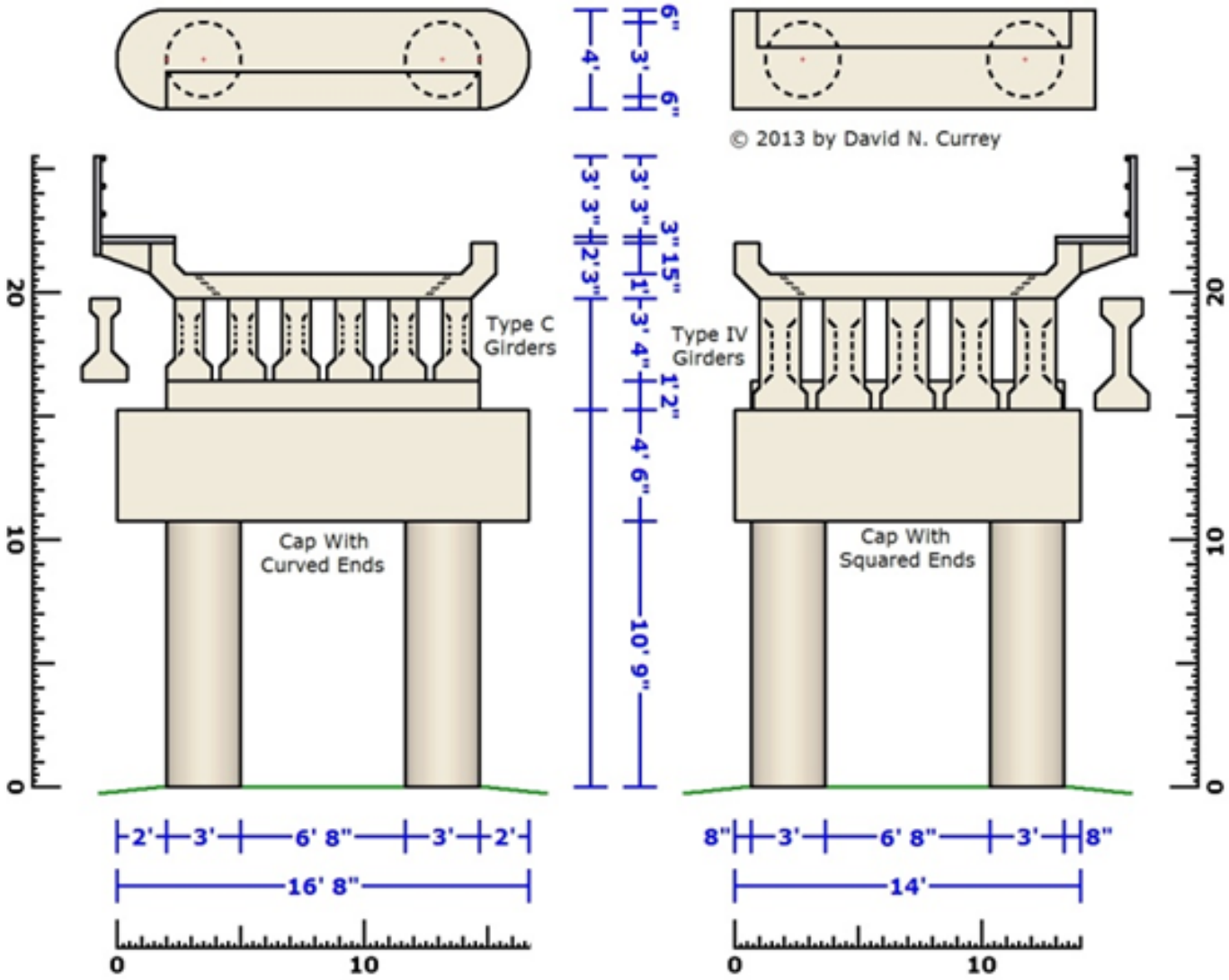
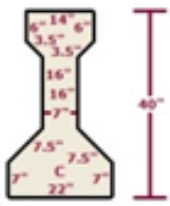
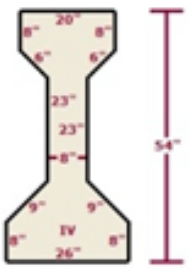
140' Pre-Stressed Concrete Beam Bridge Circa 1960
Designed by David N. Currey





The end contours of the Type C prestressed concrete girder (shown on the left) and the Type IV (shown on the right) include the dimensions. Note that the dimensions given for the angled sides are NOT for the length of the angled side, but for the horizontal and vertical components of that length. Thus, in the case of the Type IV, the angled dimensions of 6" plus the width at the narrowest part of 8" total up to 20". All concrete components in this and the other drawings contain about a 1" bevel at a 45 degree angle on all 90 degree corners to reduce the tendency of the concrete to chip and deteriorate at these points. This 1" bevel is ignored in the dimensions.



Memorial Park

By Gene Mangum

Memorial Park in Mystic is on a hillside overlooking the Guadalupe River. The park is accessed off of River Road. It was originally built during the 1930's as a part of a WPA Project. It was added to over the years and is still a popular picnic spot with Mystic residents and the playground is much loved by the local Mystic children. Legend has it that the cannon was captured from the Mexican Army just after Texas became an independent nation, but that is likely a myth. However, many local residents swear that it is true. Figure 1 shows an overview of the completed park.

Figure 1 - Overview of Memorial Park in Mystic

Construction

The Mystic Memorial Park was built from a Woodland Scenics kit that I purchased many years ago. The Memorial Park kit, # S132, is still in production. Most of the detail parts including the barbeque pits, fireplace, trash cans, memorial park sign, the cannon, the picnic tables, the "tire" swings, the "teeter-totter", and some of the figures are white metal castings. The shelter and swing frames are made from strip wood and the shelter base and cover is card stock. All castings, the shelter, and swing frames were painted using various shades of solvent-based and acrylic paints. The two concrete step sets were scratch-built from styrene and painted with aged concrete acrylic paint.

As mentioned earlier, the Mystic Memorial Park is built on a hillside overlooking the Guadalupe River. The park site was generated as the ½" blue foam was cut out for the mountains behind the residential area off of River Road. Figure 2 below shows the general layout of the park features as the foam was being laid but not yet completely secured to the base. Figure 3 shows the same scene after the Sculptamold was applied. As I have mentioned in previous articles, the Sculptamold used on the Mystic Branch is mixed with thinned earth-colored acrylic paint. None of the park castings are necessarily in their final spots and some are not actually shown. In Figure 3 the concrete steps between the levels are in place.

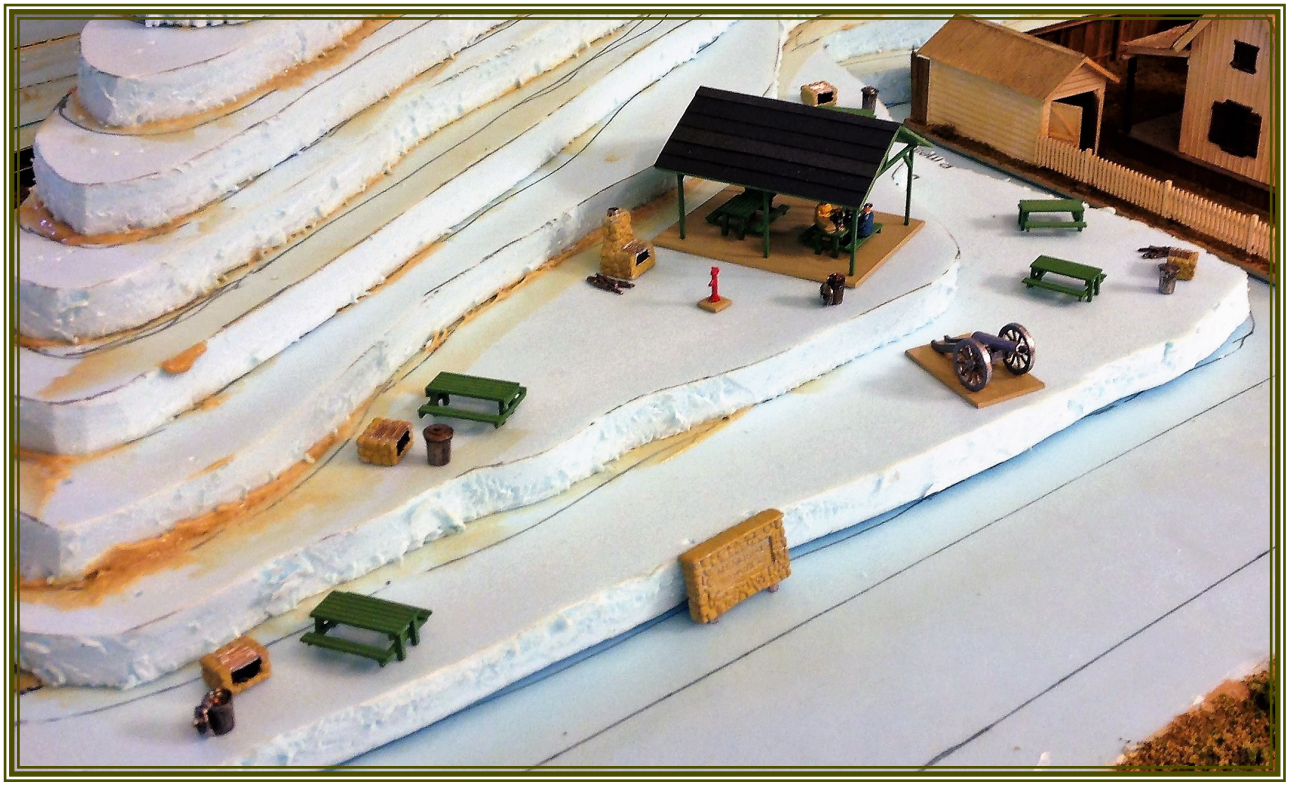


Figure 2 - Memorial Park Area before Foam is Secured

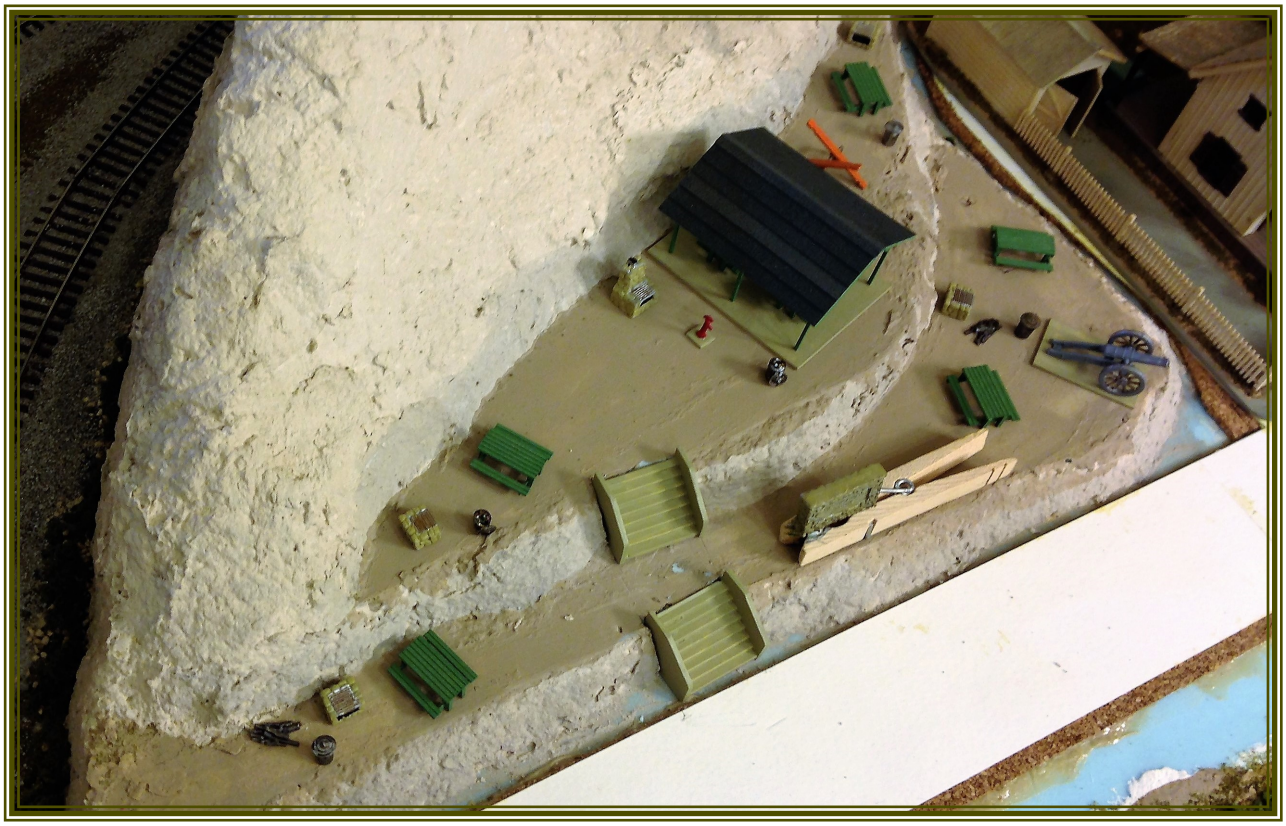


Figure 3 - Memorial Park after Sculptamold is added

Figure 4 shows a front view of the park after completion. Figures 5 through 7 show detail views of the park after completion.

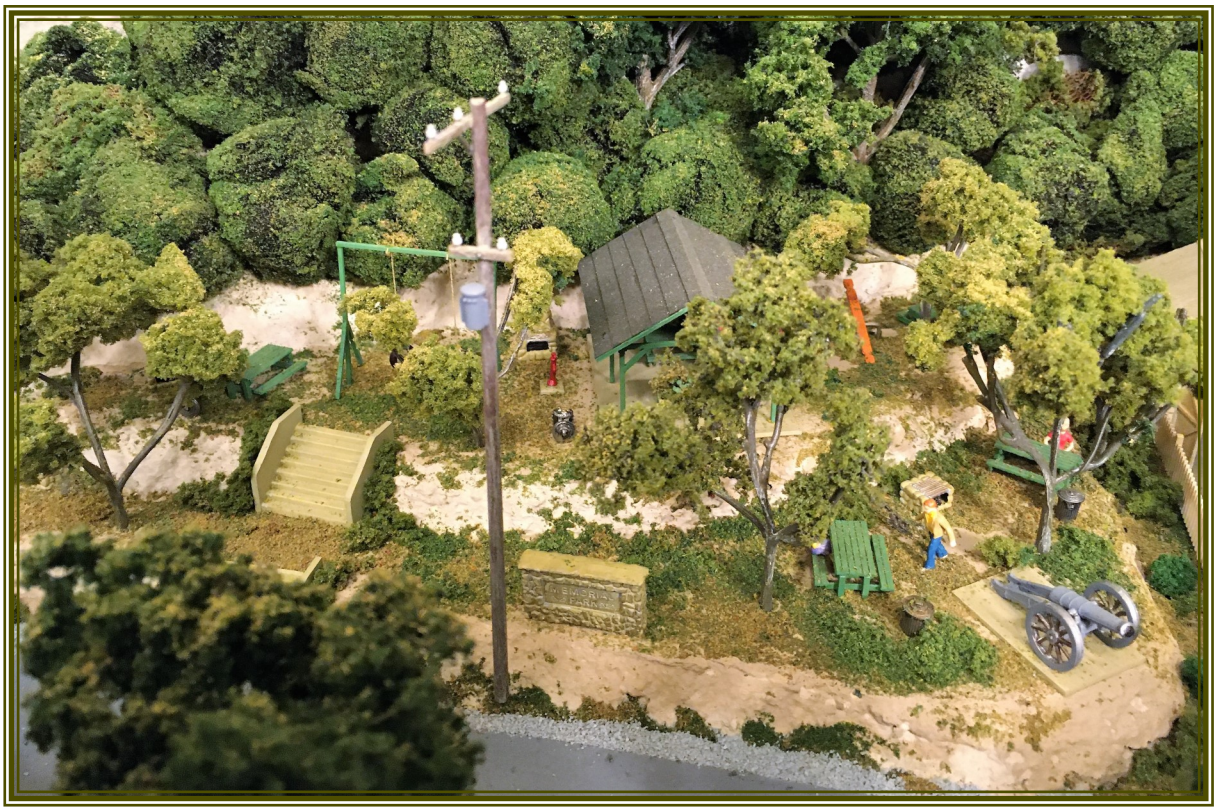


Figure 4 - Memorial Park after Completion

Figure 5– A Couple having a Picnic at the Park

Figure 6 - The Covered Pavilion Area

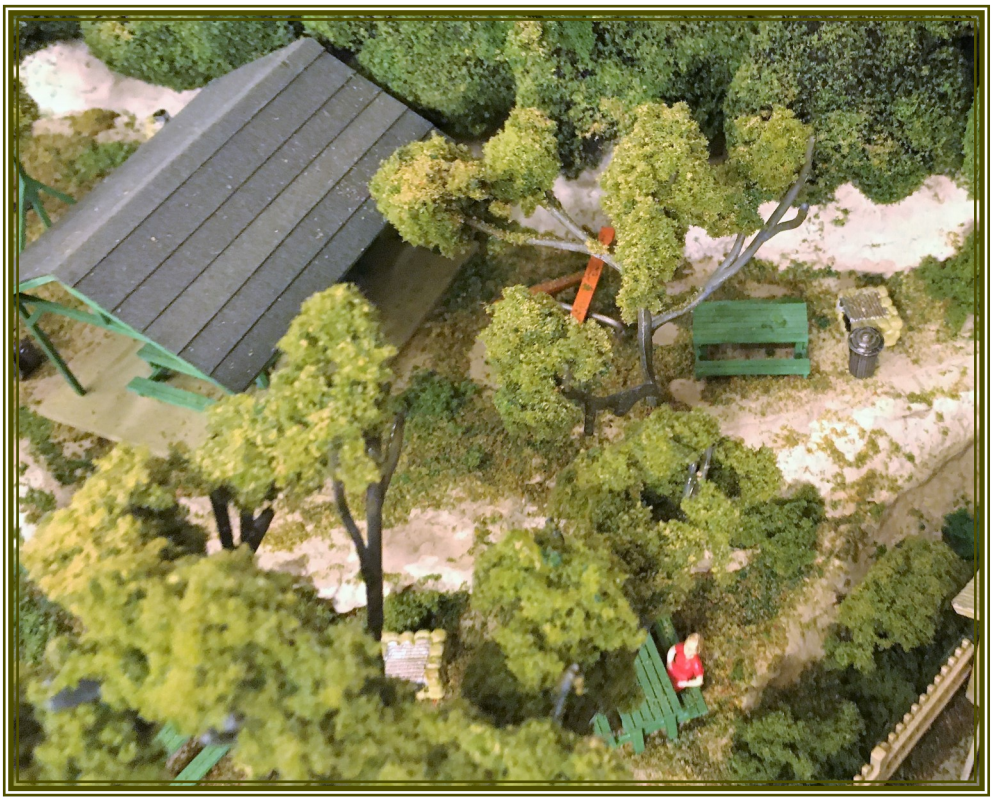
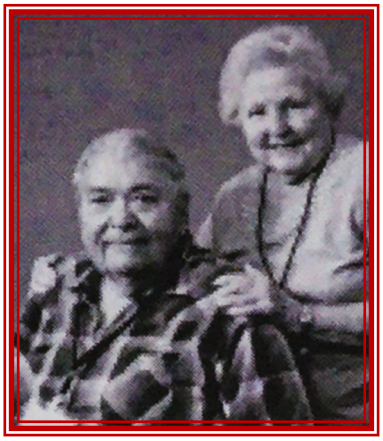


Figure 7 - Another Detail View showing the See-saw

Well that's it for this month. See you next month with a new subject.

Happy January Birthday, Ben Harris!



Ben and Liz

Congratulations to Brian and his wife, Emily!

They welcomed their precious baby girl, Addison Brie, on 12/3/2020. She weighed 7lb 13oz.

NOTE: To share your celebrations with your San Jac family, please email d.gatohogno@gmail.com before the 14th of the month to be included in the next Derail edition.

San Jac RR Club Meetings take place the first Tuesday of each month at 7pm

Now In-Person and ONLINE

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Visitors are always welcome!

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Next Meeting

TUESDAY, JANUARY 5

AT 7PM

HYBRID MEETING: ONLINE AND IN-PERSON

"THE STORY OF BOXCAR 312"

BY PETE LEACH

MEMBERS: CHECK YOUR UPCOMING EMAILS FOR DETAILS AND THE LINK.

At Home Refreshments:

your drink & dessert of choice

Video Corner

Operating Coal Loader – LIVE Coal Loads in HO Scale