I am building a Central Valley 150’ truss bridge. The kit I bought has punchplate girders—CV sells other similar bridges with different girders, and larger or smaller bridges than this, in HO or N. Here is a picture of the kit from their website:

The styrene is actually black, and everything is included except the rail.

Had I known when I ordered this bridge what I now know, I would have preferred a different style of girder. The other option is lace girders, which instead of punch plate have riveted X’s along the open face of the girder. I will explain later below.

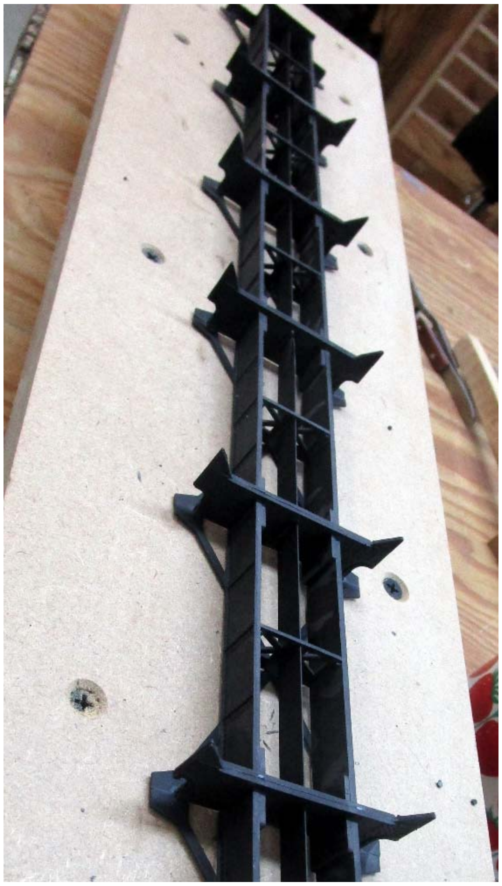
While I will occasionally describe issues I had with the construction, I will say that this seems to be a fine company. At one point, I was paying too much attention to some aspects of the instructions and cut the girders on the wrong face. I called the company to order more, if possible. The woman who answered (she could have been Mrs. Central Valley) sent a whole new batch to me and would not let me pay for them.

Central Valley provides a series of youtube videos showing, more or less, all the steps involved in building the bridge. https://www.youtube.com/c/CvmwUS/playlists

Not all of the instructions in these videos were exactly what I needed, or were easy to follow, but they were useful. The videos show the assembly of the laced girder version which is mostly similar to the punchplate.

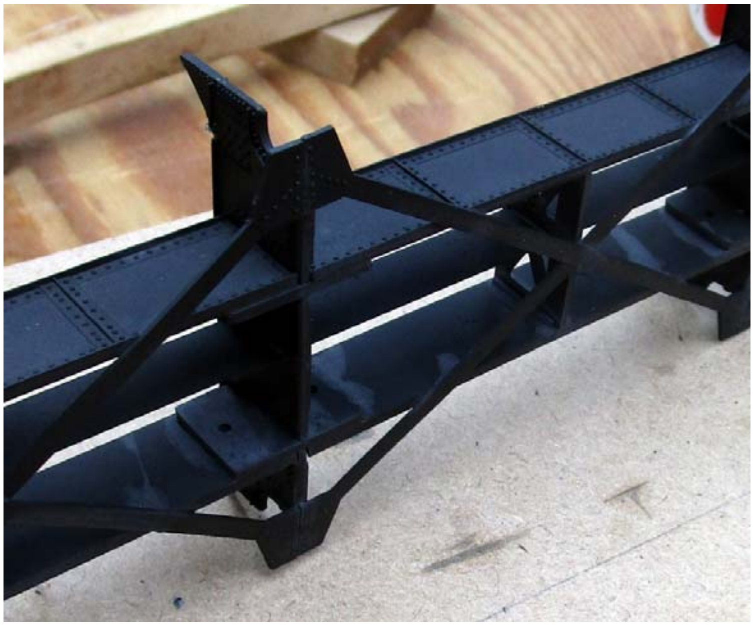
The relevant series is the 1902 bridge instructions.

The load bearing portion of the bridge goes together rather quickly and is not very troublesome. Below are some progress photos:



This is part of the bridge floor. It's about 21" long and is designed to not only be self-supporting and strong, but to allow the upper girder section to rest on it and be removable, for track maintenance etc.

Some of the parts have "locator pins" designed to make the parts assemble more smoothly, but using the pins forced the bridge into a curve, so I cut them off and put the parts together without them. <u>The important part is to make sure the bridge is straight.</u>



Part of the underside of the floor.

Here, as in other portions of the videos, the builder instructed assembly of these x's over a template which were then tweaked to match the spot where they fit in. Since the only part of the assembly that was really visible was the ends of the cross girders, lined up with the end of the x, it made more sense to place those parts where they belonged, and let the middle of the x fall where it would. There were several other examples of the video showing precisely how to do something, but not necessarily concentrating on the part of the assembly that would be most visible if it was placed wrong. In general, given a choice when assembling parts that may not all go together perfectly, decide what will be most visible and look best/worst if placed one way or another.

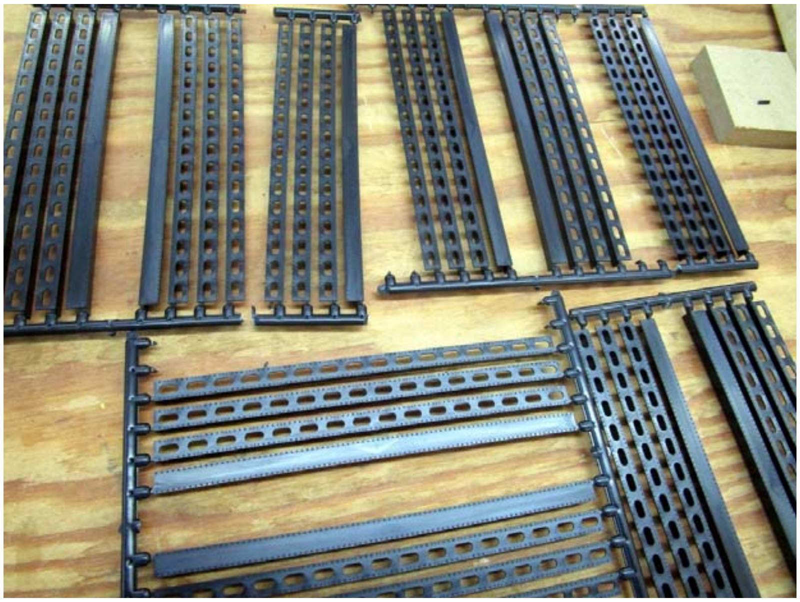
I'm using only Methyl Ethyl Ketone (MEK) for gluing. It welds the styrene very quickly, provided that the parts are unpainted, and it applies easily with a small brush. As ever, use with adequate ventilation.

Tie sections are provided, so you only need to add rail. I'm not showing the installation of the rails.

PART 2: THE GIRDERS AND THE UPPER PORTION OF THE BRIDGE.

So far this has been pretty easy. Now things get a lot more complicated.

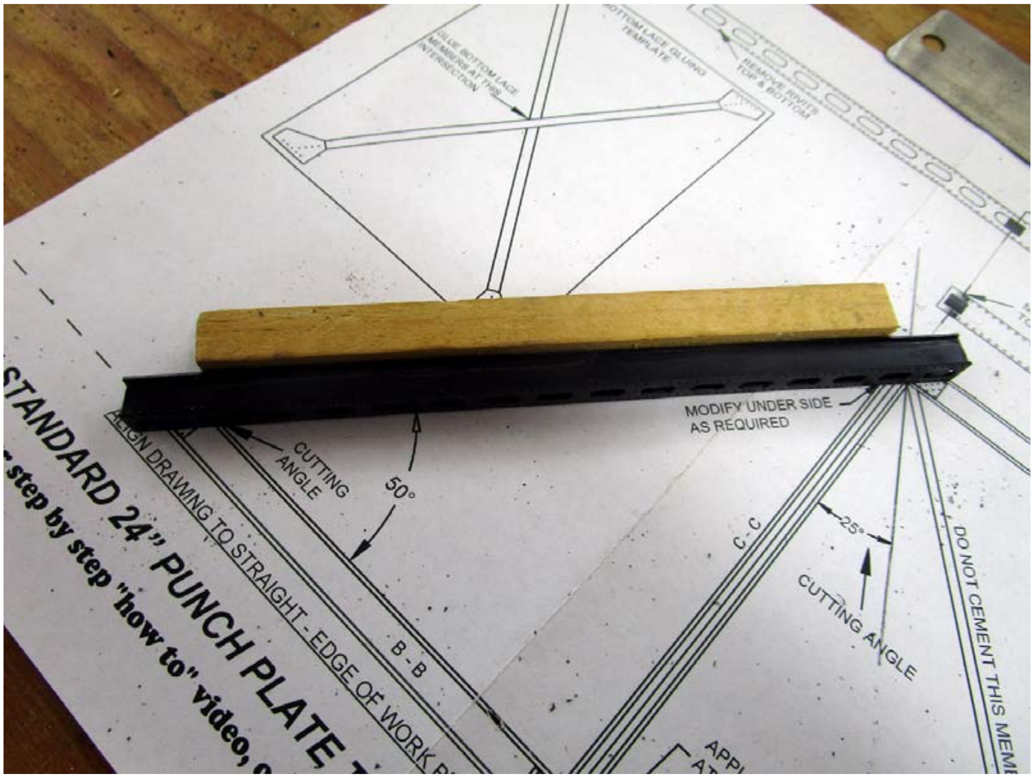
Here are some of the girder sections, waiting to be glued into four sided girders:



These sections are 2 sided, but making them into 4 sided girders requires quite a bit of fiddling with each one to keep the edges where you want them.

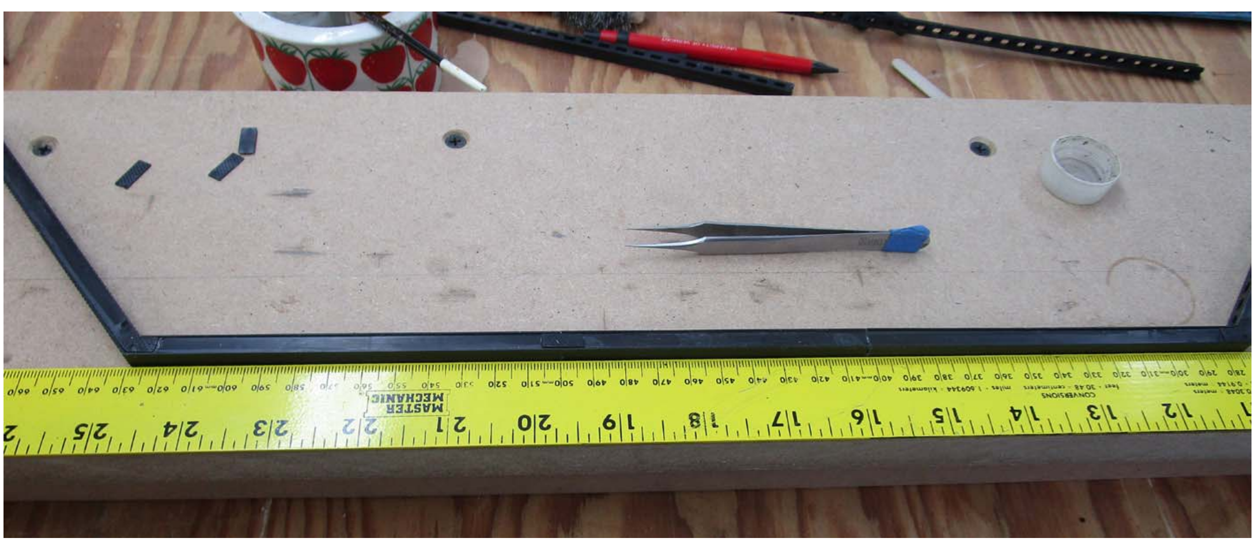
Gluing one girder. The plastic clamp is annoying to work with. The little orange taps keep rotating out of parallel. I eventually chucked them and used <u>inverted clothespins. These are very handy and I have some that provide more clamping (thicker springs) and some less force. I can show how to make them if anyone wishes. It's easy.</u>

Eventually all the many girders were glued up. Now it is time to cut them. Yikes!



It would be great if I had a miter box that provided adjustable angles. But I don't, so I will have to eyeball the 50 and 25 degree angles. And they have to be pretty exact! If the girder is too long or short it will cause problems, as shown below. I evened up some of the cuts with my random orbit sander. Delicate work.

I did have a miter box to cut 90 degree angles, of which there are several to make. That helped—it kept both sides square. Did I mention that every girder has to be cut.



Starting to glue the girders together. Straight? Maybe.

After I had made the two girder sections which would form the two sides of the bridge, I realized that these sections had to be exactly the same. Otherwise, any cross member would not be at right angles to the sides and the whole bridge would be skewed. So there was some un-gluing, re-cutting, fiddling and other frustration.

After the main girders are in place, thinner upright girders are inserted into the frame. Here is where the punchplate girders are at a disadvantage. Because the end of the upright has to fit into the horizontal girder, the necessary holes have to be carved out of the girder. This is messy and it's hard to get them in the right place with the first try. With a laced girder, the X's are just snipped off where necessary, as shown in the Central Valley videos, and there is no real carving of the styrene.

There are diagonal braces to install, consisting of 2 sides that are glued together at the ends with pin and socket. These are very fragile, but the most annoying part was that they tended to cling together in the middle, which looked bad.

My un-prototypical solution was to glue little bits of styrene between them.

These braces are, in my opinion, the one flaw of this kit. They are just too fragile and continued to break. My eventual solution will be to replace them with either wire or strips of brass.

Finally the upper section is finished. Close inspection will reveal some flaws.

PART 3: FINISHING THE BRIDGE: PUTTY AND PAINT MAKE A CARPENTER WHAT HE AIN'T.

It was hard to make this bridge "perfect". As described above, this wasn't simply a case of putting parts together that were meant to fit.

One of the flaws that many models have is where parts that should meet end up with some sort of gap between them. This is common in building a styrene model where the walls are brick, for instance, and meet at a 45 degree angle. The eye is drawn to gaps that don't belong. There are various putties and filling materials for these issues, and I often see them used on things like filling in window holes on locomotives that are being transformed to a different model. The solution I am using here is not for locomotives, rolling stock, etc. Modeling purists, please look away…

My solution, which I use with many plastic buildings, and in this case a bridge, comes in a 5 gallon bucket: joint compound. It usually takes only a tiny bit to fill a gap; it is easy to mold, wipes clean, can be sanded, or removed with a little water, and dries hard and paints well.

Cracks and small joints have been filled. Even if a little bump remains, this will catch the eye less than a gap.

The bridge was painted with a can of flat black “Quick Color Spray Enamel” from Home Depot. It dries fast and costs $1 per can. I have lightly weathered the bridge with chalks, and will decide on the final weathering when the bridge is installed somewhere.

Bridge shoes are also supplied, but not installed at this time.

Thanks for reading. TW