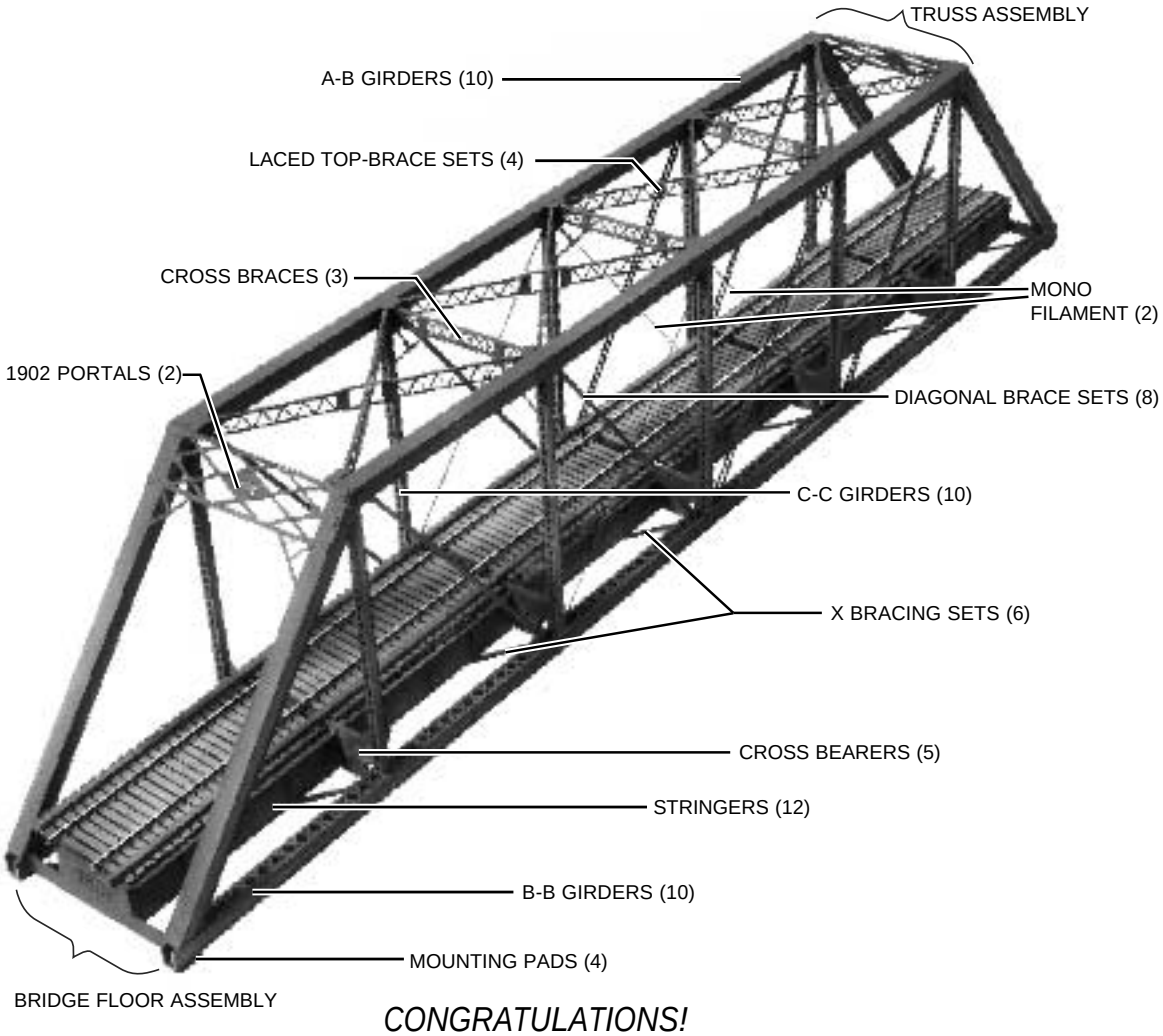
CENTRAL VALLEY #1902 HO SCALE 150' PRATT TRUSS BRIDGE



CONGRATULATIONS!

You have just acquired the finest steel structure kit ever produced for HO Scale. When completed, your model will be comparable to the best of contest models - and you don't even have to be a riveter!

As with all plastic kits, "flash" will sometimes appear on part edges. The "flash" should be cut or scraped from parts before removing from sprues if possible.

Delicate parts should be cut, not broken, from sprues.

A liquid styrene modeler's cement is recommended. Follow the cement makers' instructions. The Truss Bridge Kit is molded from a typical grade of impact styrene common to all popular hobby kits on the market. The components of this kit can be combined with any other kit components or modeler's styrene stock for custom or scratch building projects.

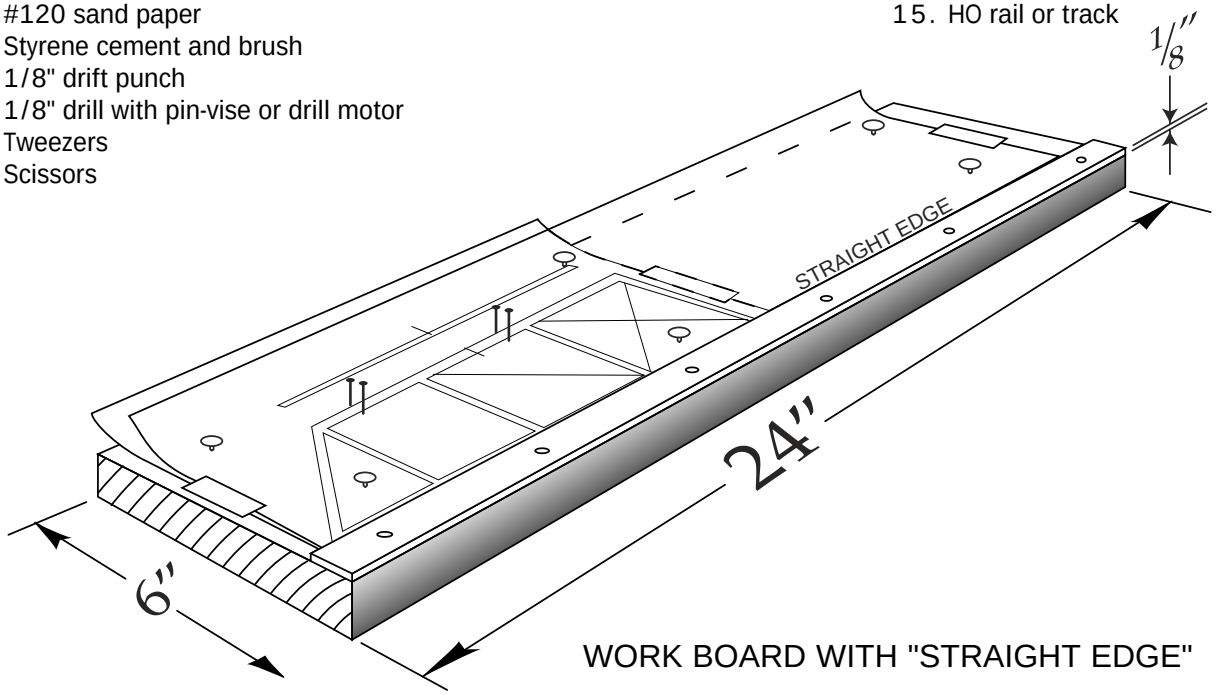
The tools and materials listed are ones you probably own or are already familiar with. This kit was designed for the simplest construction techniques. However, it is not recommended for assembly by or use by young children. Adult modeling tools and skills are required for assembly and the finished model is not able to withstand the handling or usage that children would give it.

Although Central Valley assumes no responsibility, implied or otherwise, for any injury from or damages from the use of or construction of the model, nor any guarantee of performance of the model in its finished, or unfinished state in any application, we do guarantee to the extent of replacement of, any defective part or component.

Furthermore, if you should have a problem or "goof" during the assembly, write to us for the parts you need and we will replace them free of charge, plus postage and handling. We want you to complete the model!

TOOLS AND MATERIALS - RECOMMENDED

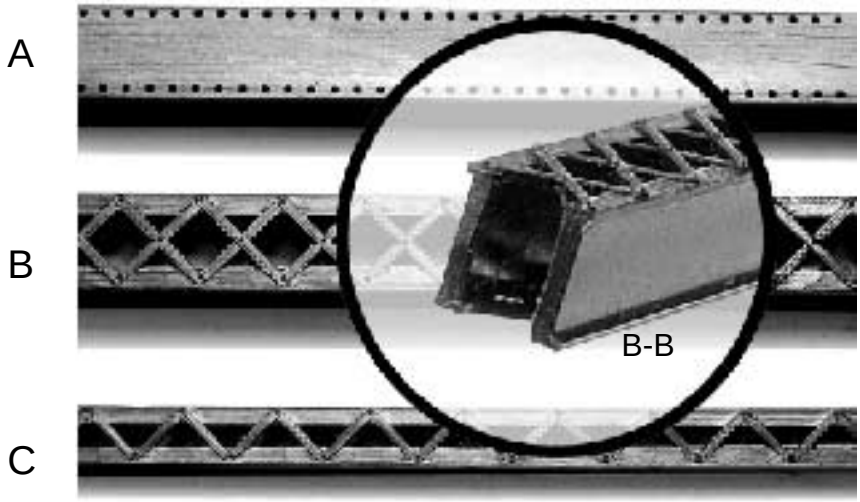
1. Work board with straight edge (see Fig. 1)
2. Modelers knife
3. Modeler's razor type saw
4. Small files
5. #120 sand paper
6. Styrene cement and brush
7. 1/8" drift punch
8. 1/8" drill with pin-vise or drill motor
9. Tweezers
10. Scissors
11. Fine steel wool
12. Model maker's "C" clamps
13. Small 1" X 2" or 2" X 2" blocks
14. Model paints and painting equipment
15. HO rail or track



WORK BOARD WITH "STRAIGHT EDGE"

The "work board" with straight edge is strongly recommended. It can be rotated to allow more comfortable sawing positions when cutting angles and lengths. The Truss Assembly Diagram should be trimmed at bottom line of truss side view and secured to the left side of work board with the bottom edge butted to the straight edge. An over-lay of "waxed" paper prevents inadvertent adhesion of assemblies to paper. Straight pins' brads, and small weights can be used to assist in alignment and holding parts on the board.

BOX GIRDER ASSEMBLY



THREE STYLES OF BOX GIRDER COMPONENTS

These parts make the main truss assemblies There are three (3) styles of box girder parts.

***COOL TIP**:*

Use a pair of #26 drills inside the A-B and B-B girders.
In the small C-C girders use a pair of #55 drills with wooden clothes pins to clamp during the gluing process.

Box girder assemblies should be assembled so that a small overlapping flange occurs along both sides.
Cement all ten (10) type "A" (riveted) girder members to ten (10) of the type "B" (laced) girder members forming 10 box girders with the type "A" riveted surfaces opposite the type "B" laced surface. ("A-B" Box Girders)
Cement all remaining type "B" girder members to each other forming 10 box girders with the lacing on opposite sides (B-B Box Girders).
Cement all type "C" girder members to each other forming 10 box girders with the lacing on opposite sides (C-C Box Girders).
Set all box girders aside to dry.
When dry, polish sides with fine steel wool to eliminate any defects caused from cementing.

BRIDGE FLOOR ASSEMBLY

This kit is designed to use one of the finer scale rail sizes (code 70, 81, or 83). The fine detail and overall realism beckons for the use of one of the scale sizes, however, if code 100 is to be used, the following suggestions are offered:

Omit the tie sections supplied and use snap track or ready track ties and rails over the span, or -

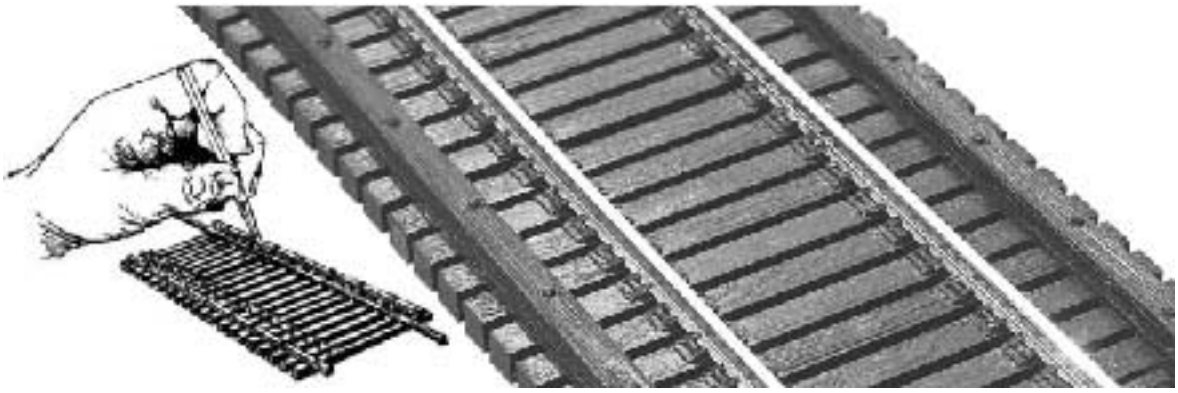
File away tie plates and spikes and secure rail with an ACC type cement (Go to step 3)

If using the finer scale rail sizes, proceed as to follows:

Step 1

Cut two (2) pieces of code 70, 81, or 83 rail to any desired length longer than the bridge (21 3/4"). If the bridge is not going to be installed immediately, 22" or 23" will do.

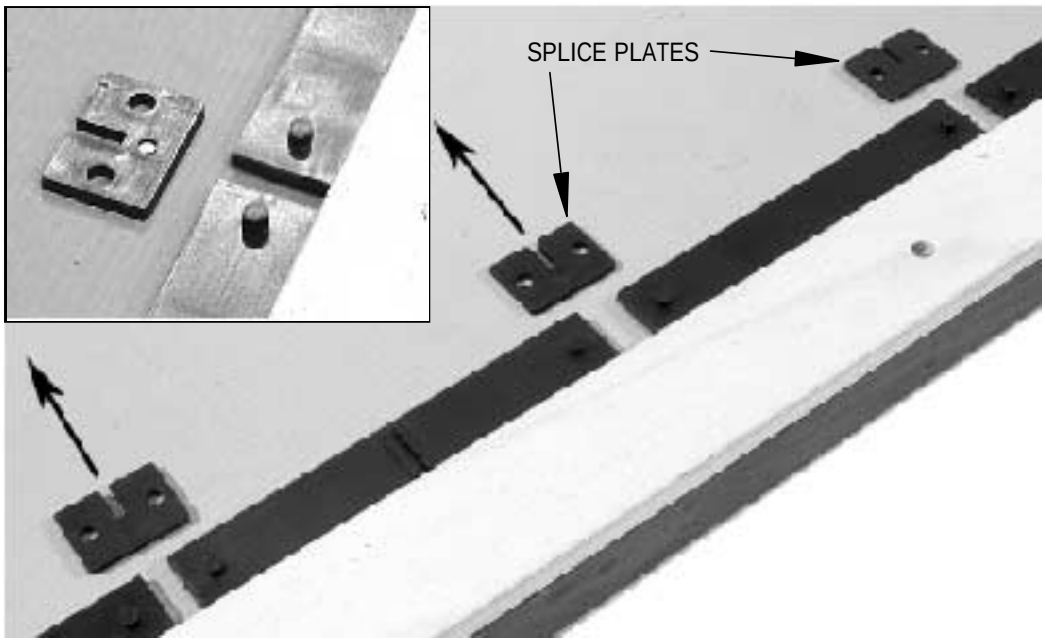
Step 2



CLOSE UP OF THE SPIKING DETAIL

Working on a solid surface. Secure rail to tie sections by locating rail between molded spikes and using finger pressure, gently mashing spikes over rail foot with a flat ended punch. Locate and secure all six sections with just a few spikes on each section, adjust for straightness and proceed mashing spikes on both sides of rail (Spaces between the sections will be filled by Cross Members on Bridge Floor Assembly. ("Step 6"). Set assembly aside!

Step 3



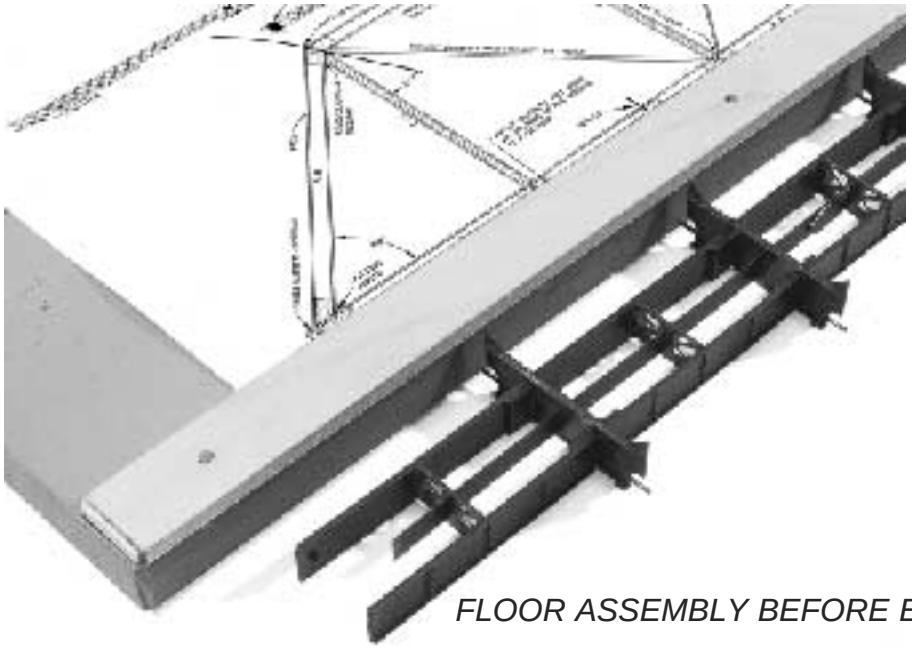
Cement (2) sets of (6) stringers and stringer splice plates together against the work board. **Be sure the splice plates all face the same direction! Let dry.**

Step 4

GLUING FLOOR ASSEMBLY UPSIDE DOWN WITH WEIGHTS

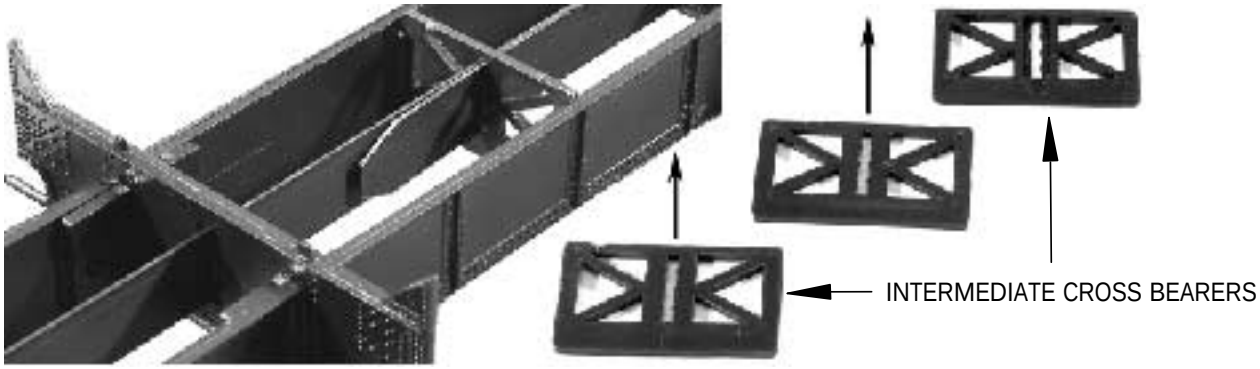
Locate and cement cross bearers into slots in the stringer splice plates making sure that the stringer assemblies are well seated in position. Locate and secure upside down with weights on bottom against work board straight edge to dry. **Do not cement end pieces at this time.**

Step 5



FLOOR ASSEMBLY BEFORE ENDS

Locate, but do **not** cement, the intermediate cross bearers into position. The thinner lateral member must go upwards toward the bottom of the ties. Thread the steel re-enforcing strips through the cross members and the "loose" intermediate cross bearers. Note: The steel strips will be tight and require filling a "lead" to assist in assembly.
When the steel strips are in place, cement the intermediate cross bearers and end plates onto the floor assembly.

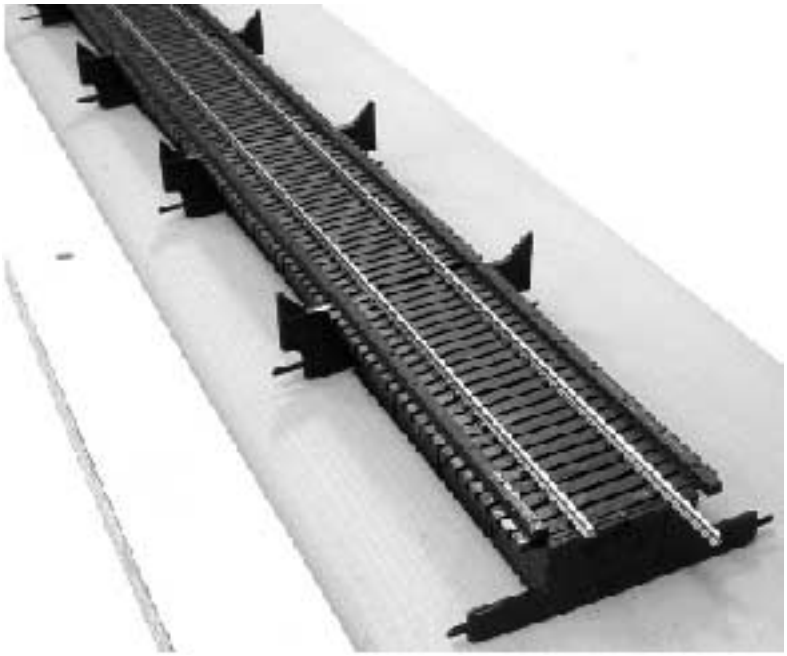


STEEL STRIP DETAIL *INTERMEDIATE CROSS BEARERS*

Step 6

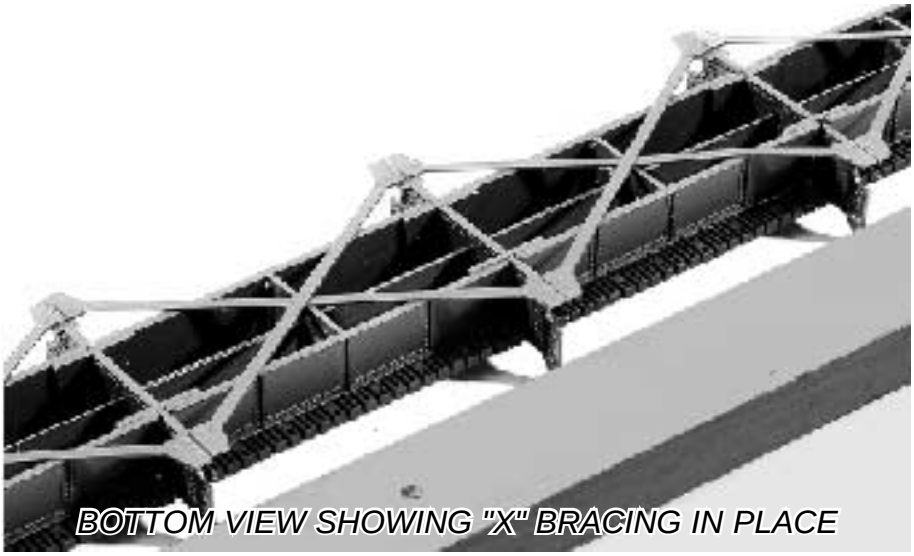
RAIL AND TIE ASSEMBLY SHOWING GAPS

Locate and cement track assembly to floor and let dry under weights. Cross bearers will fill gaps between tie sections. Use straight edge on work board to insure straightness and allow assembly to dry under weights. If snap track or ready track code 100 is used, removal of ties at cross bearers will be necessary



FLOOR ASSEMBLY WITH TIES

Step 7



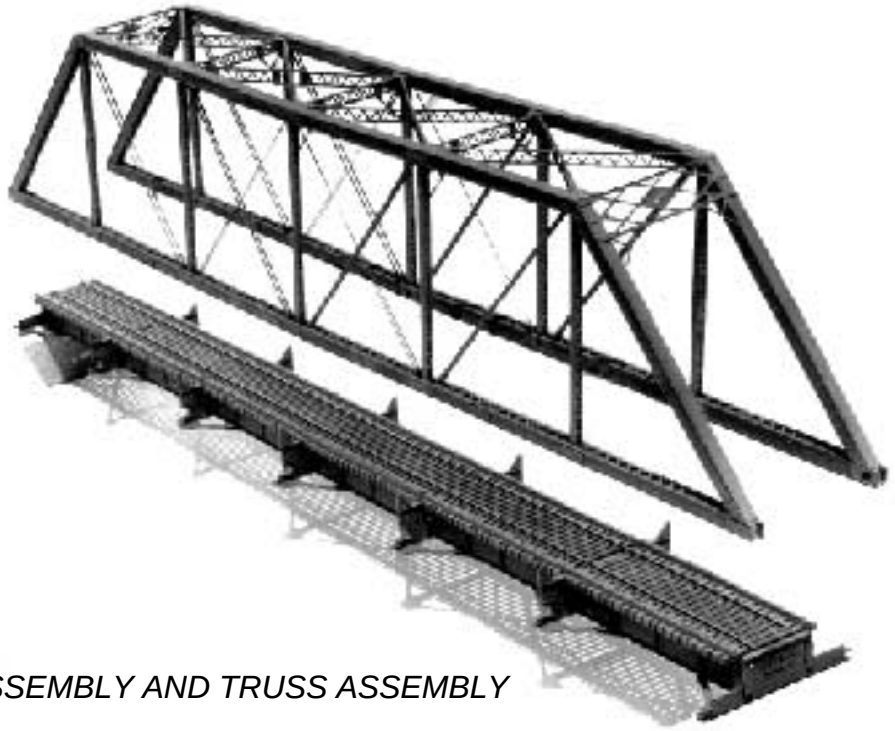
BOTTOM VIEW SHOWING "X" BRACING IN PLACE

Cement "X" bracing to underside of bridge floor. Trim corner plates of X braces for mounting shoe clearance. If bridge is to be put into immediate service (not handled separately), it is recommended that the ends of the mounting pins on the cross bearers be trimmed flush with the edges of the cross bearers.

Step 8

The bridge floor can now be mounted to the layout and used!

TRUSS ASSEMBLY



FLOOR ASSEMBLY AND TRUSS ASSEMBLY

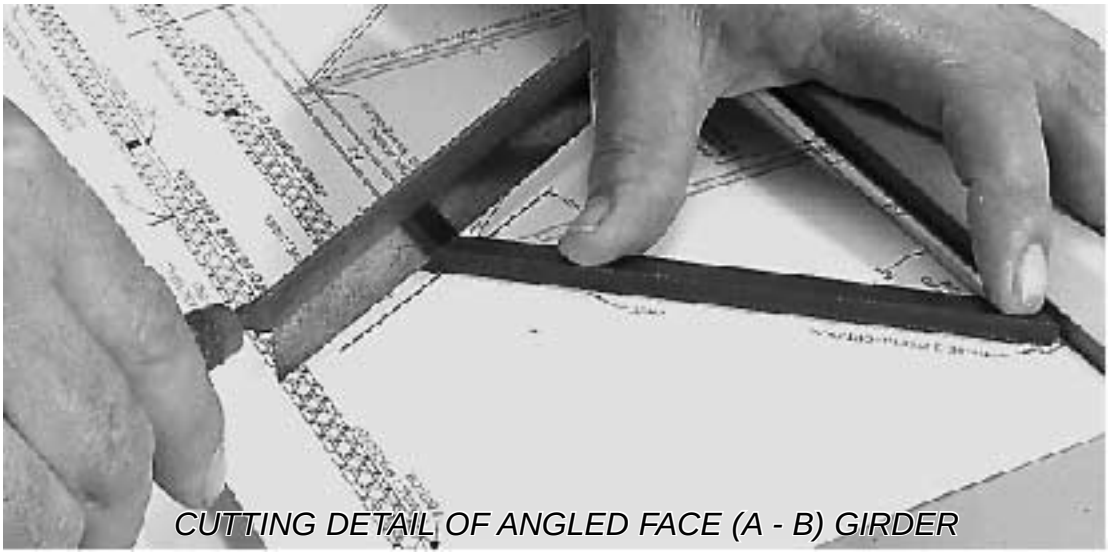
PHOTO SHOWING EASY SET--IN / LIFT-OFF USING MODIFIED RAIL JOINERS

The forth-coming "Truss" assembly is not intended to be permanently attached to the bridge floor, but only rests on the under side "X" member gussets and abutments allowing for easy track cleaning and maintenance. If the bridge floor assembly is mounted before truss assembly is completed, please note that the mounting shoes on the truss ends should be considered and allowed for by appropriate shimming under bridge floor at abutments

Cutting box girders should be done with a modeler's "razor" saw. Use a "back" stroke for the first marking stroke. Final adjustments of angles and lengths are best accomplished with sand paper on a flat work surface. (You may feel that a full length side view of the truss diagram would be more helpful, however, due to the inherent "shrinkage" variations of paper and plastic components, accumulative errors tend to be worsened by such a long diagram, thus making assembly confusing and inaccurate.

Step one (1) through four (4) are the most critical of the truss assembly. The most precise and best matching of these four assemblies will assure the best finished model. Take your time here and the rest will be easy!

Concentrate on accuracy, matching and symmetry during the truss assembly.



CUTTING DETAIL OF ANGLED FACE (A - B) GIRDER

Step 1 Angled "Face" Box Girder

Using Truss Assembly Diagram as a template, lay an A-B box girder on diagram with solid side facing outward. Score and cut angles, using "razor" saw, on each end of box girder as indicated on diagram to form Angled "Face" Box Girder. Make four (4)

Step 2 Top Corner Box Girder

Lay an A-B box girder on diagram with solid side facing outward. Score and cut angle on one (1) end of box girder as indicated on diagram. Make four (4) identical parts. Check angle on these parts to Angled "Face" Box Girder parts on diagram. Make any necessary angle adjustments only on "TOP" parts - not on Angled "Face" Box Girder parts.

Step 3

Remove lacing in areas where indicated on Top Box Girder Diagram for vertical C-C box girder, diagonal brace, and tie rod clearances.

Step 4 Box Girder Corner Angle

Using Truss Assembly Diagram as a guide, cement Angled "Face" Box Girder to Top Corner Box Girder to form Box Girder Corner Angle Assembly. Make four (4) identical assemblies. Set aside to dry.

Step 5 Truss Bottom

Assemble Truss Bottom using B-B box girder assemblies. This is best done by making four (4) sub-assemblies over Bottom Box Girder Diagram. Removal of lacing and location of splices should be adhered to. Working with one (1) box girder at a time, align lacing on diagram. Remove lacing and cut box girder on splice line(s) as indicated on diagram, Cement these two (2) box girders together at splice line using straight edge on work board to insure straightness. Make four (4) identical assemblies. Using straight edge on work board, cement "center" ends of two (2) of these sub-assemblies together, forming the full length of the truss bottom. Repeat with remaining two (2) sub-assemblies for opposite side of bridge. Gusset plates **without** "pin" hex heads are used at splices between verticals on both sides of box girders. The long splice Gusset plates **with** "pin" hex head are used at the center splices on the outside of the box girders only.

Step 6 Vertical Box Girders & Semifinal Truss Assembly

Cut vertical C-C box girders to a length allowing about 1/8" of each end to enter the large box girders. File away flanges to allow entry into the top and bottom box girder assemblies. Fit these parts together on Truss Assembly Diagram when everything lines up and fits, cement in place. Using Top Box Girder Diagram as a guide for lacing removal and cutting lines as before, cut, fit, and splice last top box girder and center vertical C-C box girder to position.

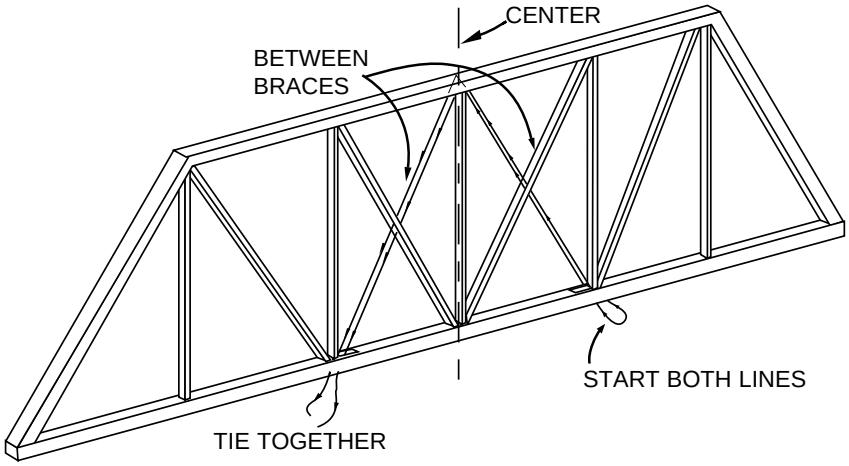
Step 7

If mounting pins on floor cross bearers have been retained, drill 1/8" holes on inside of truss bottom box girders (B-B) to fit over pins.

Step 8 Diagonal Braces

Cement the eight (8) pairs of diagonal braces together at male-female spacer-bosses. Keep them as parallel as possible. "Flex" these assemblies into the truss assemblies but **Do Not** cement. If they are allowed to "float" they will not buckle or warp. They will also be much less likely to be broken and, in emergencies, can be removed for maintenance or access problems.

Step 9



MONO-FILAMENT THREADING DIAGRAM

Thread and tie mono-filamant "tie rods" per diagram. Please note the following:

1. Loop and tying should be around lace crossings directly beneath the C-C verticals to insure clearance for the diagonal braces.
2. Use very light tension on mono-filament when tying knot. Even slight excessive tensioning will distort the truss.
3. After tying knot, secure it by heating screw driver blade and "mashing". This procedure will also relieve some residual unwanted tension in the mono-filament.

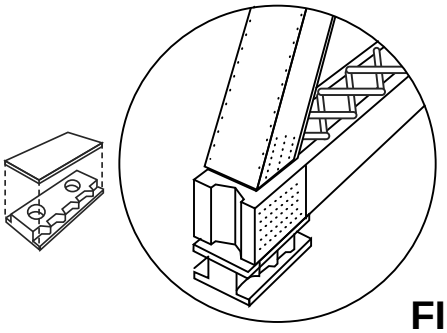
Step 10

Using the mounting plates on the "1902" portal parts as a guide, remove the rivets on the Angled "Face" Box Girders that will interfere with the portal final placement. Using blocks and clamps to hold truss sides in the vertical position, cement the three (3) top cross braces in place to establish the spacing between trusses. (Refer to photo) Cement the two (2) "1902" portals into the locations previously prepared.

Step 11

Slip Laced Top-Brace Sets together (four (4) sets), locate and cement at ends between Cross Braces and "1902" portals, and between the remaining two spaces in the top of the truss assembly. Cement remaining gusset plates at junctions and on main girders as indicated by photo or diagram.

Step 12



Cement top and bottom parts of mounting pads four (4) sets together and cement assemblies to bottoms of four (4) lower main girder corners. These should rest on the abutments when the truss assembly is placed over the floor assembly.

FINISHING UP!

The prototype bridge, today is a dull, weathered, black beast with considerable rust staining in.

The choice of color and aging is up to you, but is recommended that the model be painted with spray equipment or spray cans. Brushing techniques for rust spots and weathering would be used.

The final result of your effort should stand out as a new "high" point in accessory structures. Until this kit was produced, only a tiny handful of "masterpiece" steel bridge models existed that would compare to the model you have just completed. It should be a showpiece on any layout - now think how easily you can build the second span!

Central Valley Model Works
1203 Pike Lane
Oceano, CA 93445
Phone: 805-489-8586

www.CVMW.com

Email: info@cvmw.com
Fax: 805-489-0514

FOR MORE INFORMATION, GO TO: *http://www.cvmw.com/1900/*