PO240/241 VIADUCT
ASSEMBLY INSTRUCTIONS
Sheet 1

Check List: **Also see ❺ right.**

4 x SHEET A Printed walls and arched sections.
1 x SHEET B Printed trackbed and wing walls.
2 x SHEET C Printed inner arches (on thin card).
2 x PLAIN GREY SHEETS With arched inner strengtheners.
2 x PLAIN GREY SHEETS Marked 'E' With inner parts.
1 x PLAIN GREY SHEET Folded in two and marked 'F'
1 x A3 Instruction sheet (this one).
1 x A4 Instruction sheet 2

PLEASE - PAY ATTENTION
Read through the instructions and familiarise yourself with the kit components before you start any building.

❶ Tools to build this kit.

To build this kit you will need a few basic tools:
1. A modellers knife.
2. A cutting surface - A cutting mat or a sheet of thick card will do.
3. A sharp pair of scissors
4. A steel ruler.
5. Fine point tweezers.
6. Something to clamp surfaces together, Bulldog clips are good for this job, or clothes pegs.
6. METCALFE Ultra Fine Tip Glue Bottles (see ❸)

❷ Glue.

We recommend using **Speed Bond** made by Deluxe Materials. www.deluxematerials.com

Also **UHU** solvent free **All Purpose Adhesive.**
Both glues are fast drying, but allow time for positioning components as you build.

❸ Ultra Fine Tip Glue Applicators.

An absolute 'must' when assembling the smaller components in this kit. Perfect amounts of glue can be applied to very precise areas without any mess.

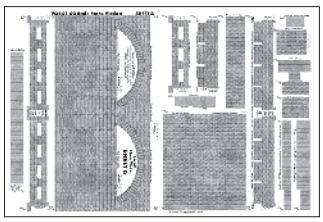
Speed Bond in an applicator was used to build most of this kit.

A METCALFE product supplied in packs of 3
Product code MT907
Glue not included

❹ Extracting components from base sheets.

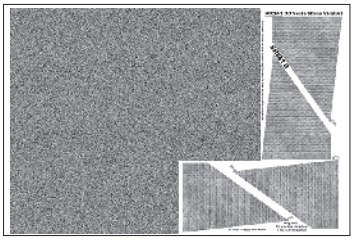
To stop the components falling off the base sheets, they are held secure with score lines (marked with blue arrows) → that cut about 75% of the way through the card.
To release them run the point of your knife along these score lines and they will come seamlessly away.
WARNING, Cut with care to reduce the risk of the blade running out of the score and cutting the component.

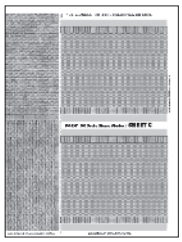
❺ Kit components. A visual guide:



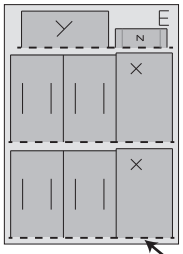
Sheet A. x 4.

Sheet B. x 1.

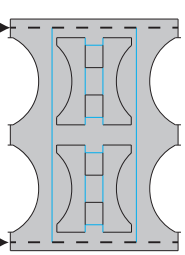




Sheet C. x 2



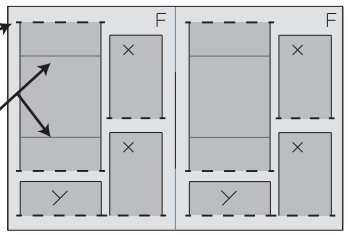
Plain Grey Sheet (E). x 2.



Plain Grey Sheet (D). x 2

Cut the two thin strips of card off along the score line. Top & Bottom.

Dotted lines indicate score rules you need to cut to release from base sheet. Dark grey lines are fold lines. Don't cut



Plain Grey Sheet (F). x 1

Located on sheets **E.** & **F.** are the following components:

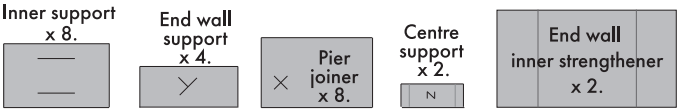
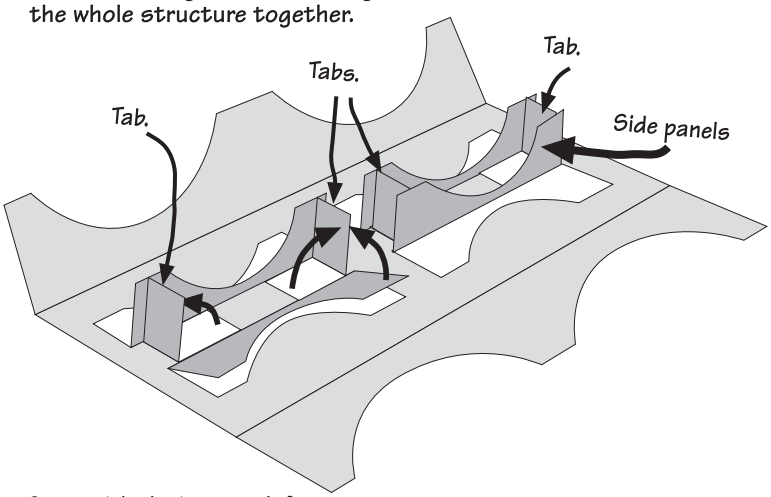


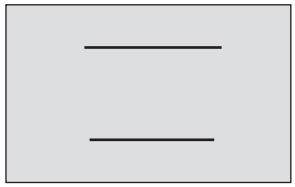
Fig. 1. MAIN VIADUCT STRENGTHENER.

There are two identical mainframe strengtheners that fold and glue to form a rigid inner chassis to hold the whole structure together.



Start with the inner arch formers.
The four tabs and four side panels all fold up at rightangles to the base (top when its turned over later on). Put spots of glue on the edges of the tabs and fix the side walls to them, hold until fast.

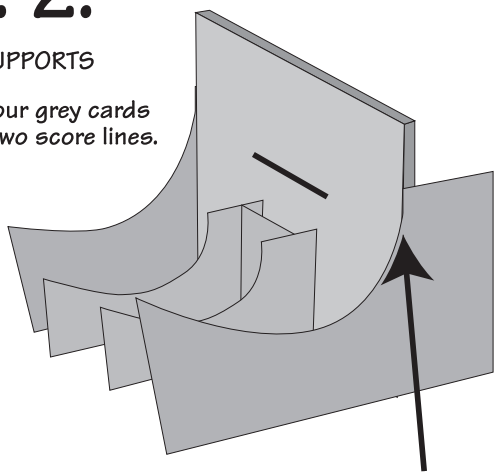
Fig. 2.



Located on Grey Sheet E.

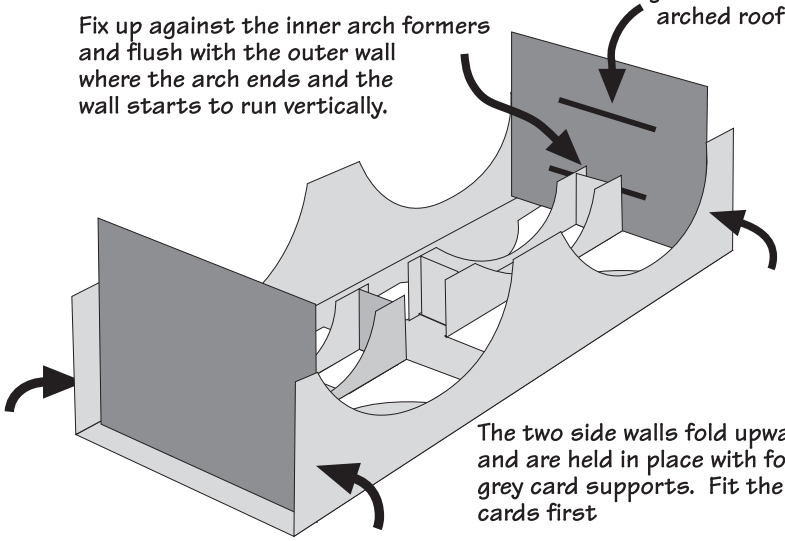
INNER SUPPORTS

Use the four grey cards with the two score lines.



Inner grey card supports. Fix each one with the embossed groove facing inwards towards the arch. These act as guides when fixing the arched roof sections.

Fix up against the inner arch formers and flush with the outer wall where the arch ends and the wall starts to run vertically.



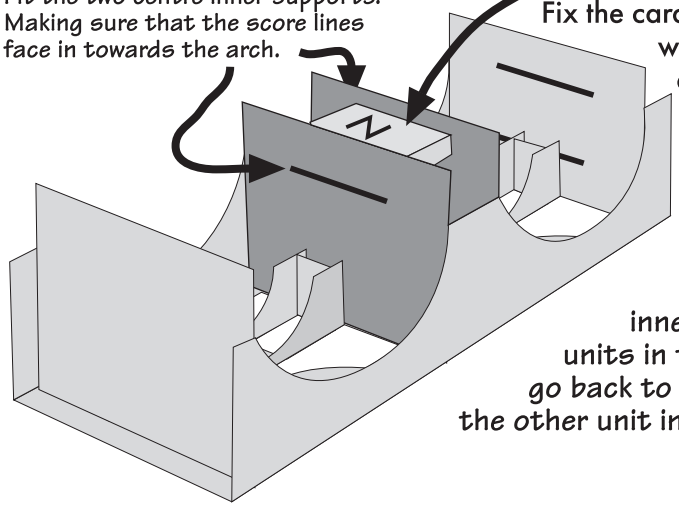
The two side walls fold upwards and are held in place with four inner grey card supports. Fit the end cards first

Fig. 3.

EXTRA NOTE: To make the two centre supports rigid, they need to be braced using the small card MARKED 'N' (Sheet E).

Fit the two centre inner supports. Making sure that the score lines face in towards the arch.

Fix the card between the supports with the two ends folded down to hold correctly.



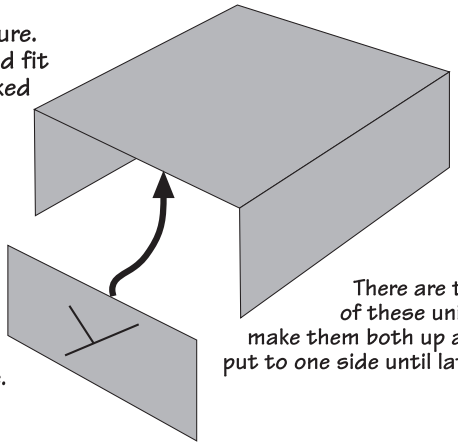
There are two of these inner strengthener units in this kit, so now go back to Fig.1. and make the other unit in the same way.

Fig. 4.

END WALL INNER STRENGTHENER

Located on Grey Sheets E. & F.

This is a simple structure.
Fold down the sides and fit
the two supports marked
with a Y

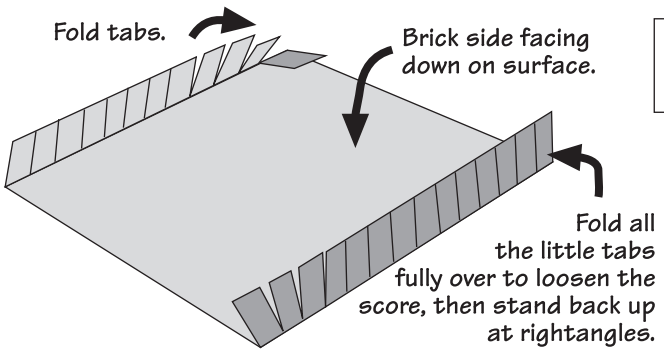


Fit one
of these
into each
end, flush
with the
edges. to form
a box structure.

There are two
of these units,
make them both up and
put to one side until later.

Fig. 5. BRICK ARCHED ROOF SECTIONS.

This looks as though it could be difficult, but it's not - BUT BE CAREFUL.
Cut along the dotted lines to release each brick arch from the sheet.
Next, fold back all the little grey tabs at each side



THE FOUR BRICK ARCHED SECTIONS ARE PRINTED ON THIN CARD SHEETS **'C'.**

Fig. 6.

Curve the card into an arch, and you will see how the grey tabs fan out and stand up at rightangles.

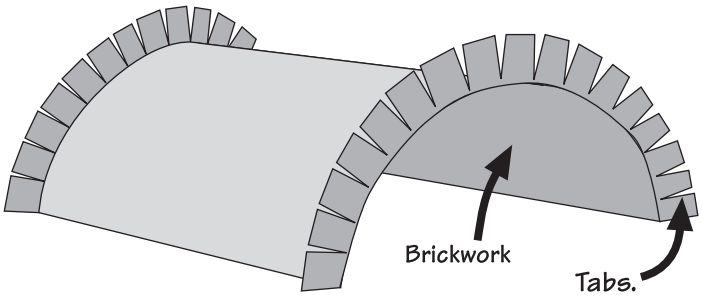


Fig. 7. FITTING THE ARCH ROOF.

Turn the arched brick roof over and push down inside the strengthener unit. DON'T GLUE YET
This is so you can see how it fits with the tabs folded over the outside of the side walls.

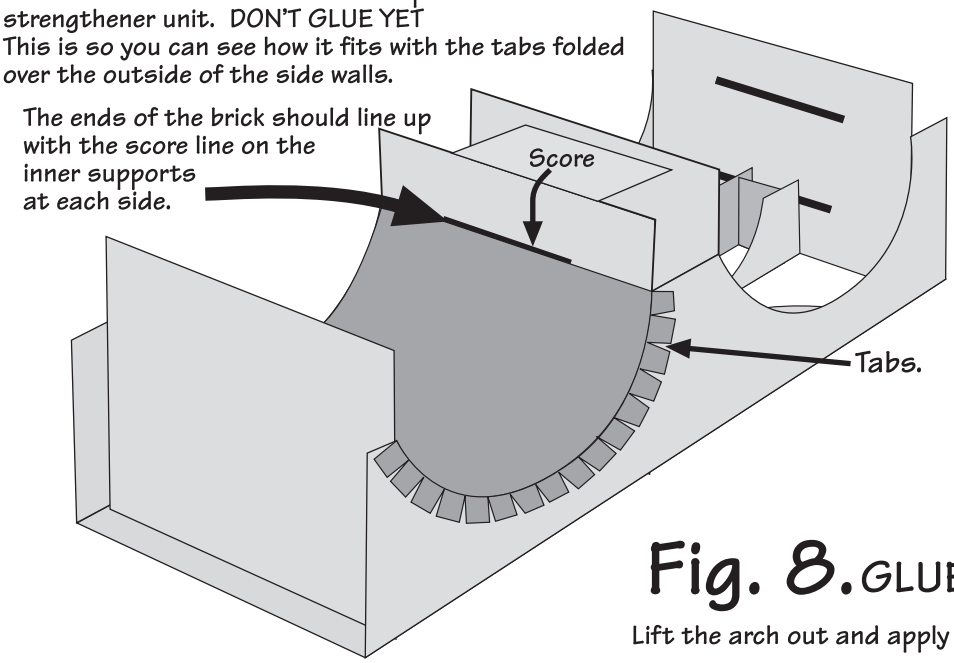


Fig. 8. GLUE IT DOWN.

Lift the arch out and apply the glue.

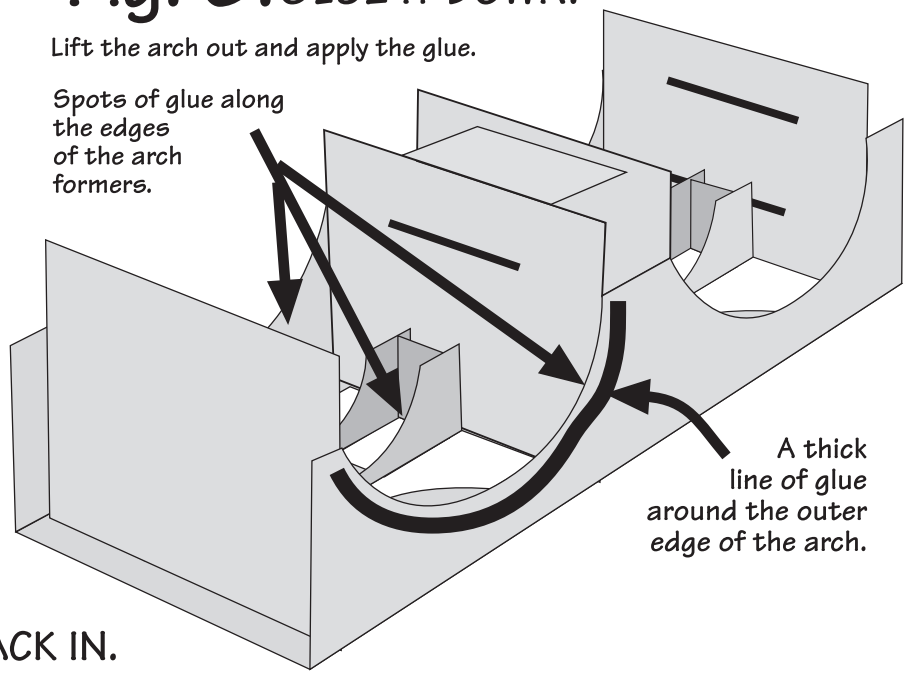


Fig. 9. FIT THE ARCH BACK IN.

Before the glue has a chance to dry, drop the arch back in so it sits in the same position that you had it in Fig. 7. Make sure the ends line up with the scorelines then push the arch against the formers and fold the tabs on to the glue. Keep pressing all edges and tabs until the glue has set.

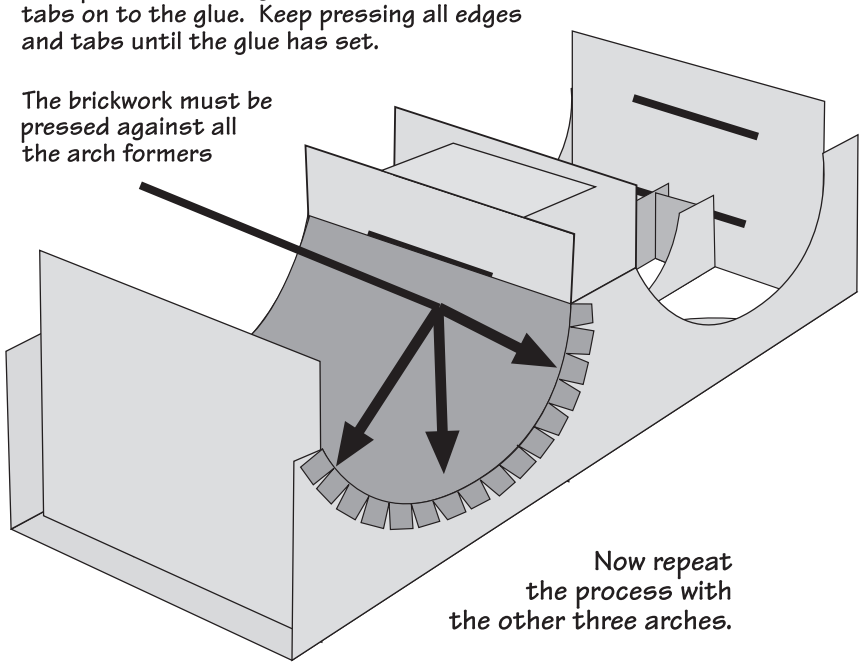
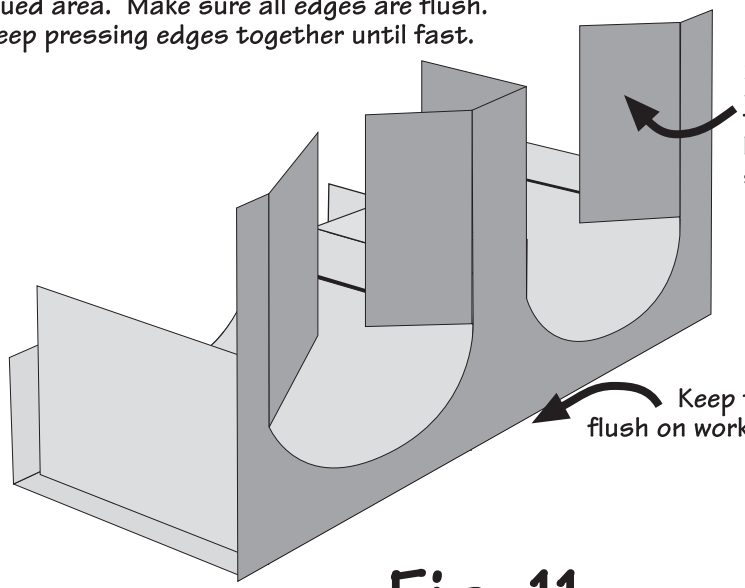


Fig. 10. FITTING THE VIADUCT SIDE WALLS.

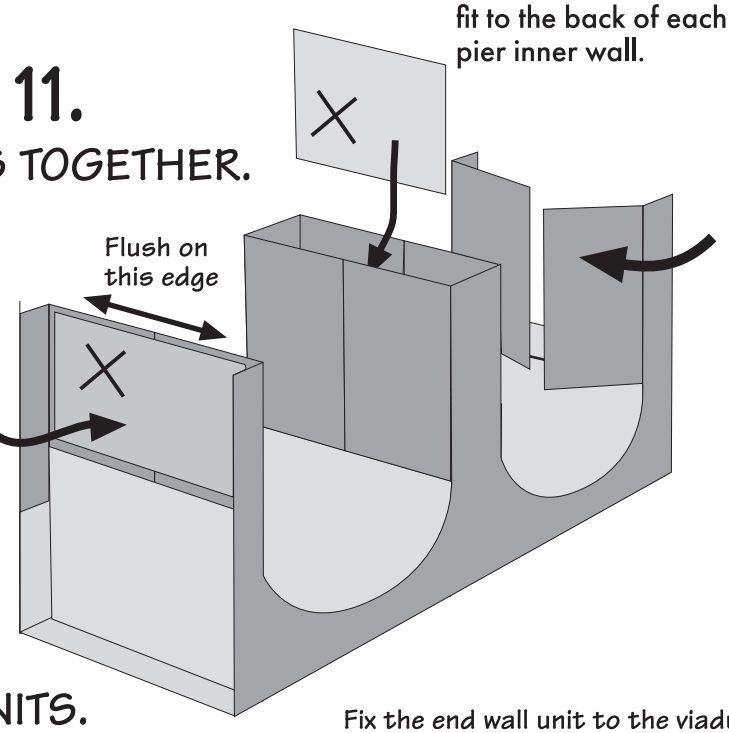
Each side wall also contains the piers, and a half width of the inner pier walls. With plenty of glue covering the side wall of the inner strengthener and placing it upside down on your work surface, carefully press the side wall on to the glued area. Make sure all edges are flush.
Keep pressing edges together until fast.



When the side wall is fast, fix the other side wall in the same way.

Fig. 11.
FIX THE INNER PIER WALLS TOGETHER.

Grey Card Joiners marked with an **X** fit to the back of each pier inner wall.



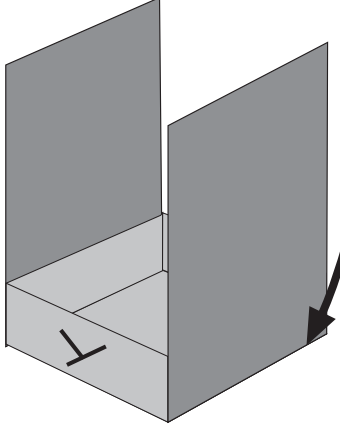
The two halves of each inner pier wall fold and meet in the centre, butt ended together. They are fixed from behind using the grey joiner cards. A few spots of glue is also needed on the inner support cards as well

Push the two halves of the walls together and hold firmly until fast. Make sure the two edges meet evenly all the way along and that the top edges line up.

Fig. 12. END WALL UNITS.

The end wall units are the walled bits that fit on each end of the viaduct and run in to the embankments.

Take the end wall inner strengthener section that you made in Fig.4. and fit the two end wall sections



Fix the end wall unit to the viaduct.

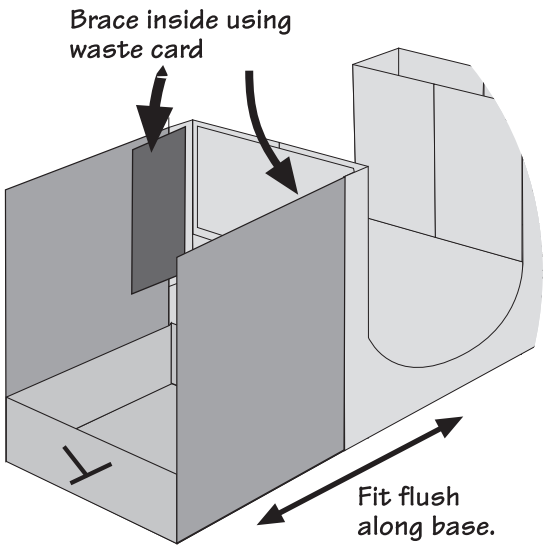


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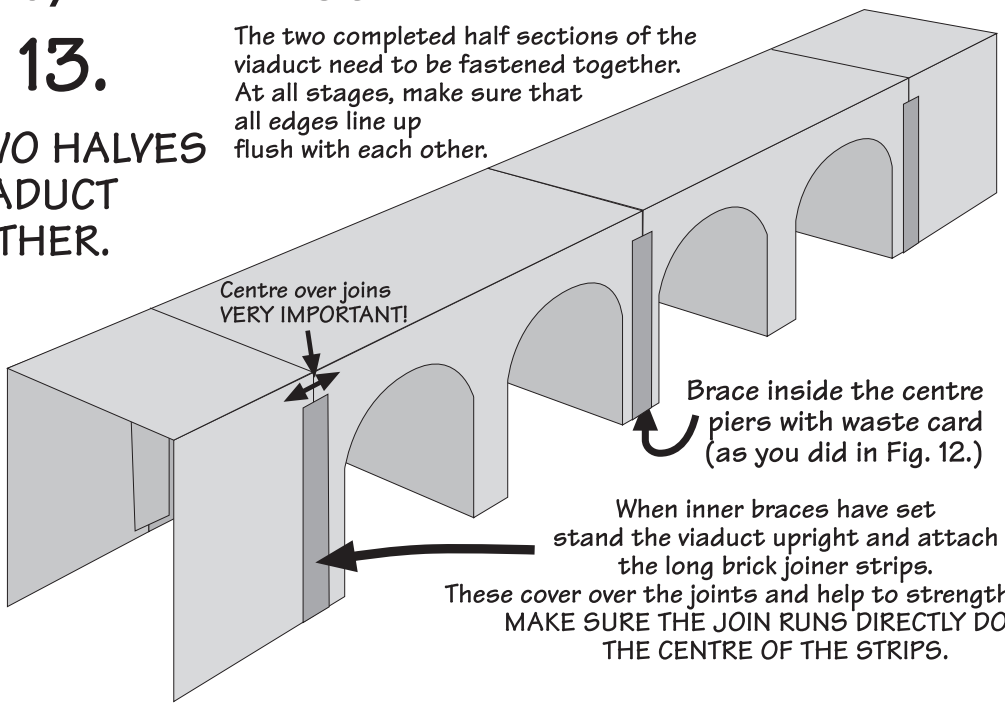
Fig. 13.

FIX TWO HALVES OF VIADUCT TOGETHER.

The two completed half sections of the viaduct need to be fastened together. At all stages, make sure that all edges line up flush with each other.

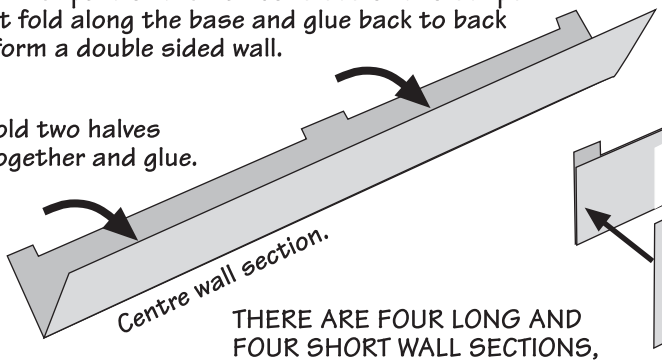
If you are making the viaduct longer by adding extra kits, add them on at this stage before fixing the top walls.



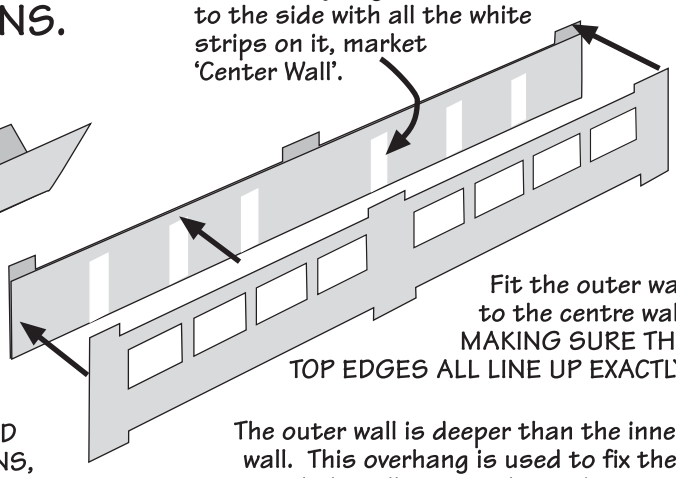
When inner braces have set stand the viaduct upright and attach the long brick joiner strips. These cover over the joints and help to strengthen them MAKE SURE THE JOIN RUNS DIRECTLY DOWN THE CENTRE OF THE STRIPS.

Fig. 14. SIDE WALL SECTIONS.

All the wall sections fit together in the same way. The inner part of the wall consists of two strips that fold along the base and glue back to back to form a double sided wall.



Make sure you glue the outer wall to the side with all the white strips on it, market 'Center Wall'.



Fit the outer wall to the centre wall, MAKING SURE THE TOP EDGES ALL LINE UP EXACTLY.

THERE ARE FOUR LONG AND FOUR SHORT WALL SECTIONS, THEY ALL FIT TOGETHER IN THE SAME WAY

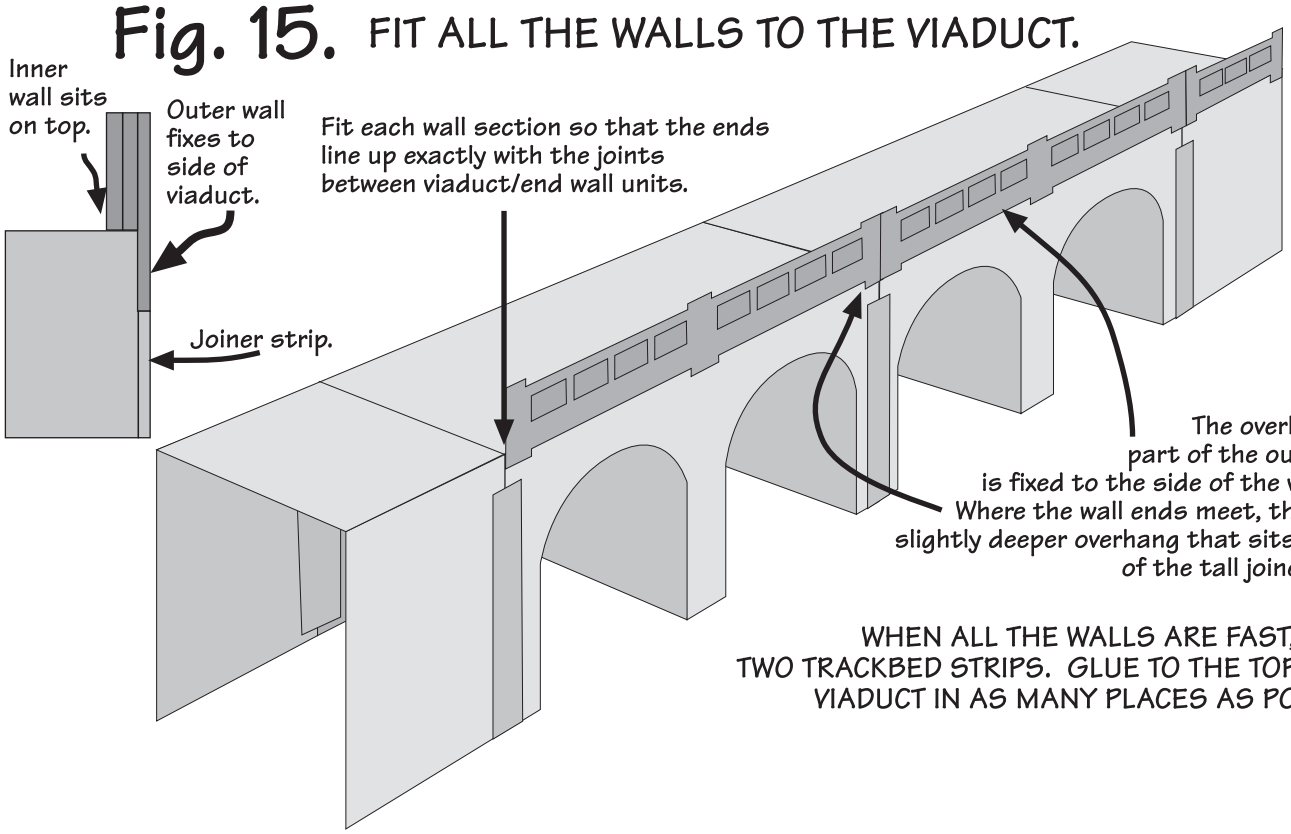
The outer wall is deeper than the inner wall. This overhang is used to fix the whole wall unit to the viaduct.

Fig. 15. FIT ALL THE WALLS TO THE VIADUCT.

Inner wall sits on top.

Outer wall fixes to side of viaduct.

Fit each wall section so that the ends line up exactly with the joints between viaduct/end wall units.

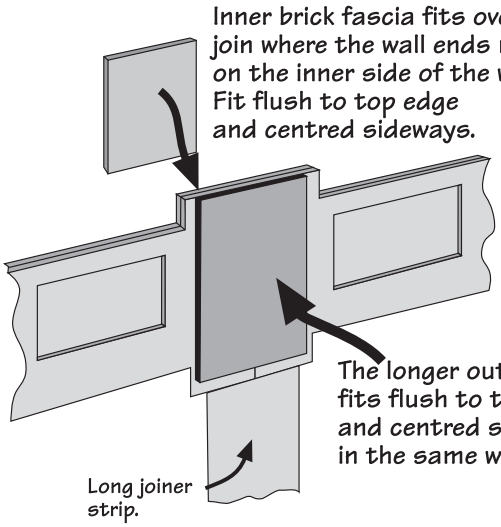


The overhanging part of the outer wall is fixed to the side of the viaduct. Where the wall ends meet, there is a slightly deeper overhang that sits on top of the tall joiner strip.

WHEN ALL THE WALLS ARE FAST, FIT THE TWO TRACKBED STRIPS. GLUE TO THE TOP OF THE VIADUCT IN AS MANY PLACES AS POSSIBLE.

Fig. 16. WALL FASCIA PIECES.

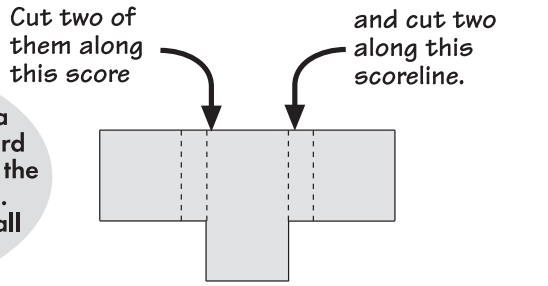
These are used to strap the walls together where they meet.



WARNING
Before fitting note that a small amount of white card may be showing between the trackbed and the fascia. Paint or cover with a small strip of waste card.

Fig. 17. WALL END FASCIA .

This little unit is designed to fit either side of the wall ends, but they need trimming down to give you 2 x left hand & 2 x right hand units.



They then wrap around the wall ends.

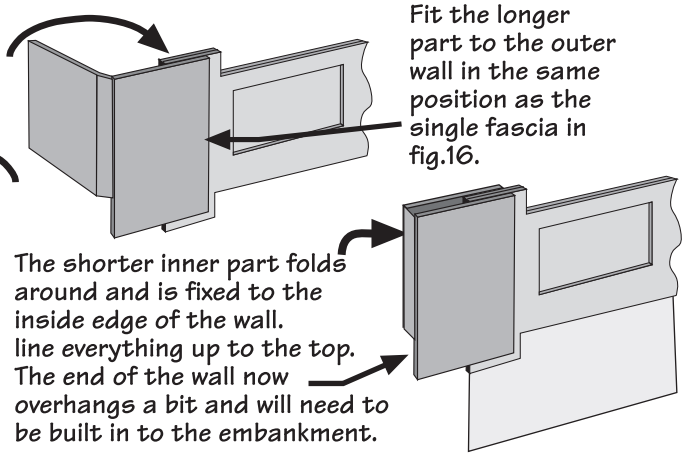


Fig. 18.

WALL TOPS .

Fit the wall top stone strips so they overhang equally on both sides.
The cap stones fit on the raised brick sections and should overhang equally on all four edges.

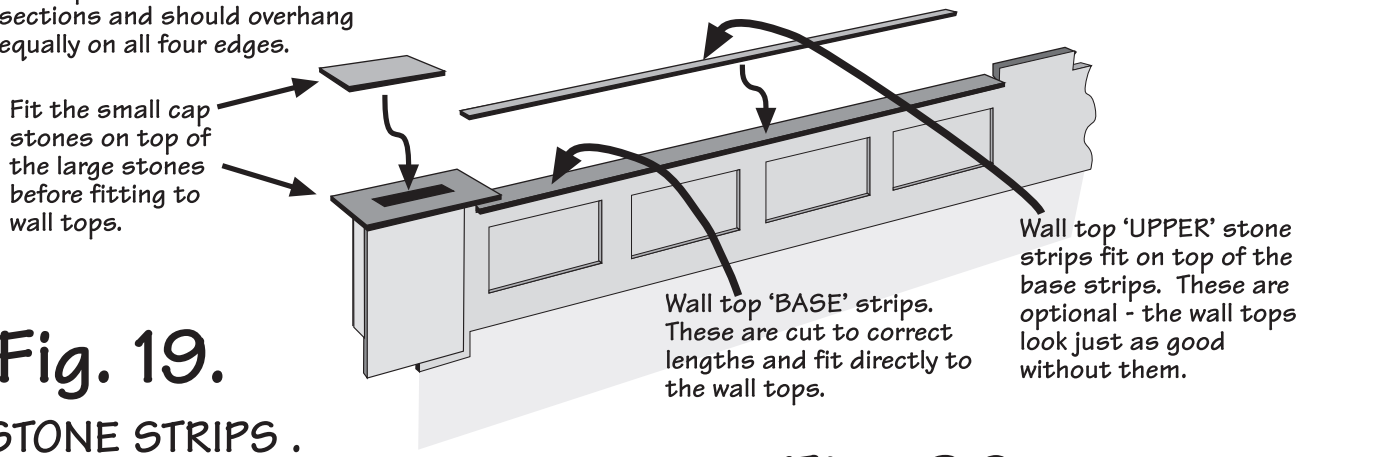
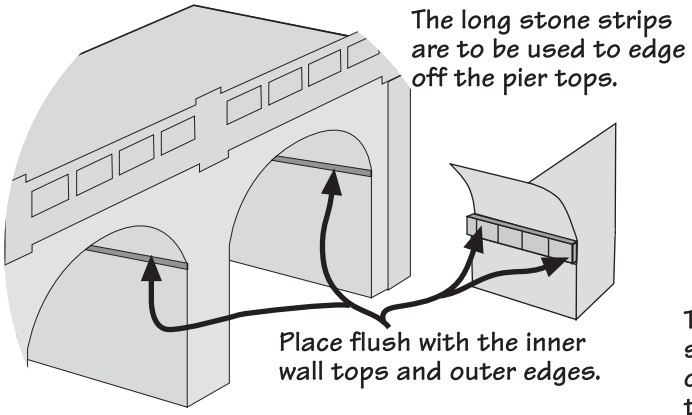


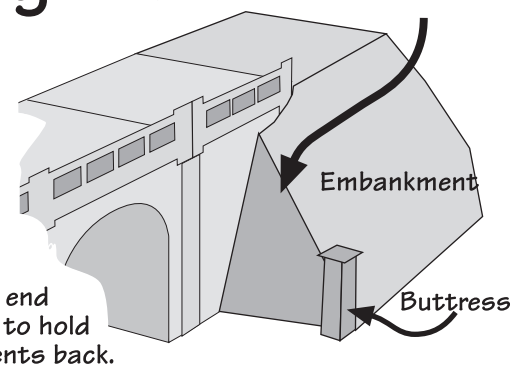
Fig. 19.

STONE STRIPS .



CORNERS & EDGES.
If you want to hide the card that shows on the scored corners, you can paint them using a very fine brush and very much watered down paints. TEST ON WASTE CARD FIRST, it's easy to make a mess and ruin your kit. If you are not sure - just leave them alone - it still looks fabulous!

Fig. 20. WING WALLS.



The wing walls stand at each end of the viaduct to hold the embankments back.
Top off, with stone edging strips, and fit the buttress to the end of the wall.
The buttress walls fold around and fix where the two half sections meet, using the yellow joiner fitted inside. The large and small capping stones fit on top.