

This Tutorial Video shows how to construct a Template for A Double Slip– using Templot 0.93 TDV

The Document is at level Version 1

This instruction tutorial has been produced by - Brian Nicholls.

Where the user of Templot is familiar with the use of the 'shortcut keys' for certain functions in the TDV, these may be appropriately used, as required during the construction of the Double Slip template.

Each of the individual operation instructions has been separately numbered in the left-hand margin for reference purposes. However, only very basic instructions are used in this tutorial, as it is assumed that the members using the TDV are more experienced and do not need minute detail of every instruction that has to be performed.

In this tutorial, the Double Slip has been modelled as P4 (4 mm to 1 foot), and any dimensions shown (in mm) in this tutorial are scaled as such.

STEP 1.

- 1.0001. The following procedures are all carried out in [Normal Mode](#).
- 1.0002. Start off with two plain track curves (or a straight and a curve, as required by your plan). These should be positioned to follow the background track plan direct through roads of the Double Slip which you wish to make a template. For the purpose of this tutorial example, I have used an example of a double slip which I have on my own layout. And the pre set guide rails used are as follows: One plain track straight, and one plain track curved.

Again for the purpose of this tutorial example, the position of the peg set onto each of the template's datum points, and hence the starting point, are arranged on the right-hand side of the screen view.

Please Note: This method won't work for transition curves, it is for straights and fixed-radius curves only. Also it is very easy to have the tracks crossing at too short an angle.

Templot can't produce crossings shorter than 1: 1.5 RAM (i.e. not more than 33.7 degrees).

A handy Hint here is, you may find one or more of the curves which form the roads of the double slip, has a transition in the area of the slip, it is worth investigating if you can overlay a constant radius curve over the original transition curve to use as a guide, in order to simplify construction in Templot.

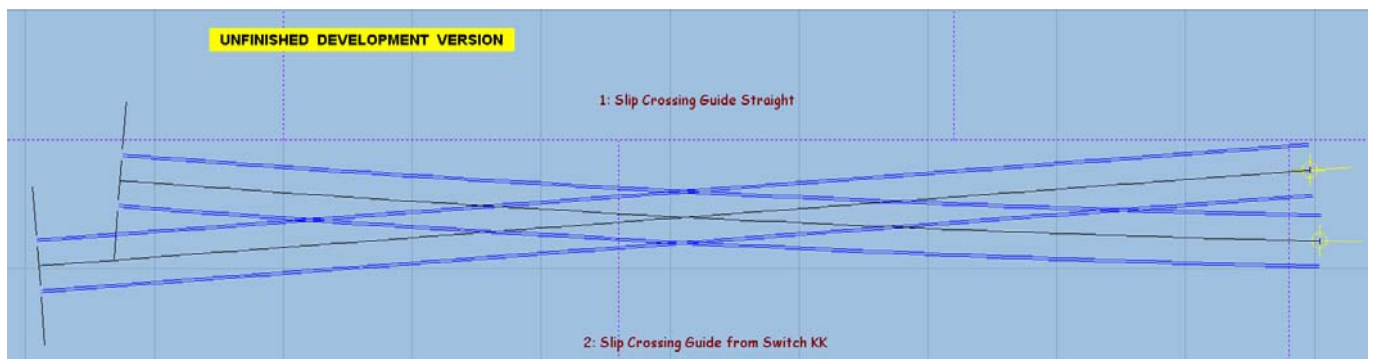
If you carefully and accurately overlay the constant radius curve, using [F6 curving](#) and [CTRL + F10 swell curving](#), so that is as near a match as possible, you can then make any linking and closure adjustments (transitions etc) with the track-work either side of the new curve.

The original transition curve can be split in two parts to achieve the linking and closure adjustments.

Remember, the overlay constant radius curve need only be long enough to reach a small distance just beyond, and outside of, the two crossing vee's of the slip. If the overlay is very carefully and accurately done, it should not show any aesthetic difference to that of the original track-work pathway.

- 10003. Once you have correctly placed your two plain track start guide rails, it is recommended that you remove or hide your background plan image, in order to avoid possible system crashes or blackouts whilst zooming in very close to achieve accurate positioning of individual templates during the construction of the double slip.
- 1.0004. Please ensure the timbers are removed from these two plain track templates.
- 1.0005. The Start screen should look something like this, as shown in Figure 1:

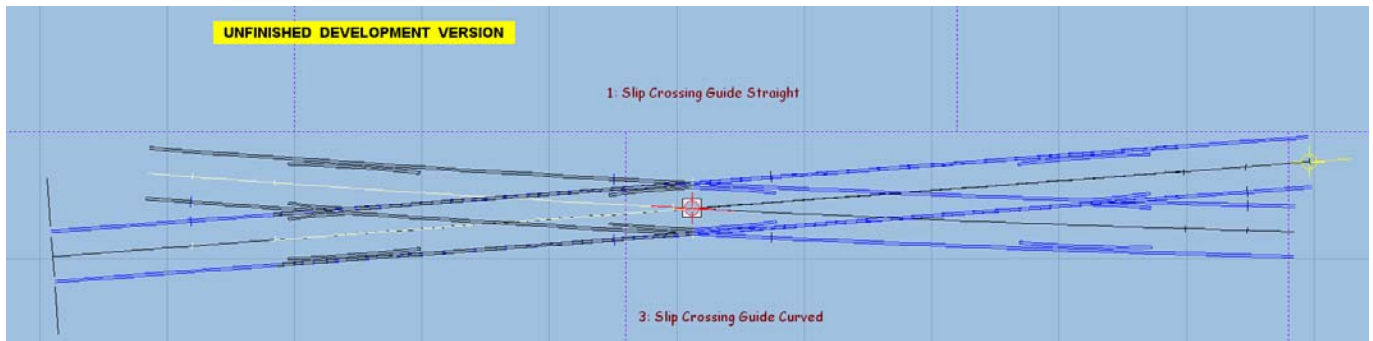
Figure 1.



STEP 2.

- 2.0001. First make the **Slip Crossing Guide Curved** the control template, the straight template should remain on the background.
- 2.0002. Click on the background straight template (in Quick-mode, right-click on it).
- 2.0003. On its dropdown menu,
 - 2.0003.1. click **< P peg/align tools >**
 - ↳ **< D make diamond-crossing at intersection >** menu item.
 - 2.0003.2. If the notch appears in space, not near any tracks, then,
 - 2.0003.3. click the blue box **Is this the right intersection ?**, the notch should then appear at the crossing intersection of the two guide rails.
 - 2.0003.4. Now, click the green box **Yes – Continue**, also click this box if the notch first appears in the correct intersection in 2.0003.2.
- 2.0004. A diamond crossing will appear fully aligned on the two guide rails. See Figure 2.

Figure 2.

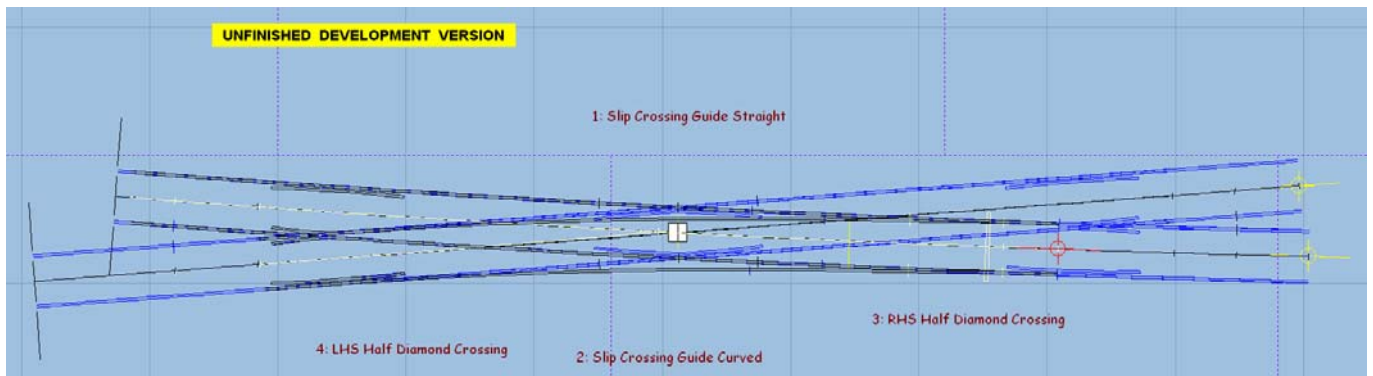


- 2.0005. Now **Store & Background** the control half diamond.
- 2.0006. Rename both half diamonds, say LHS & RHS Half diamonds.

STEP 3.

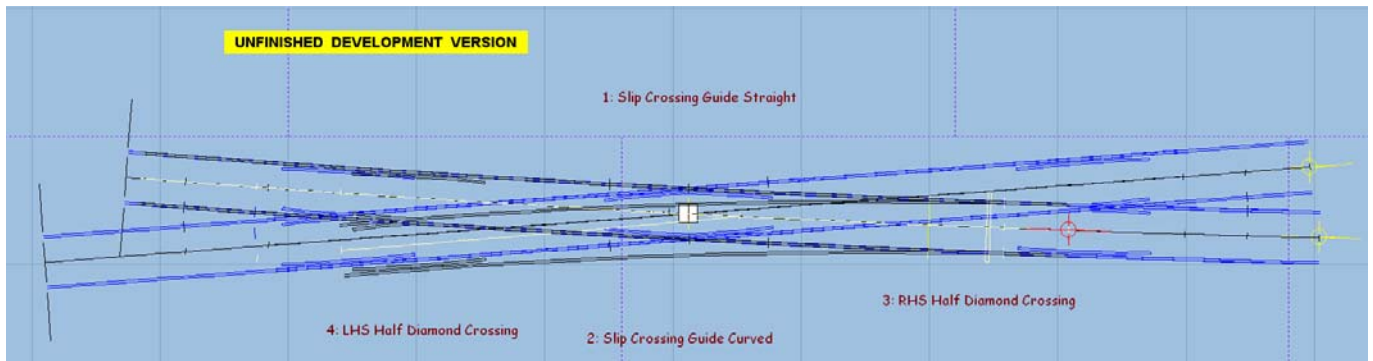
- 3.0001. Go to **< template >**
 - ↳ **< convert half-diamond to turnout...(CTRL+ T) >**
- 3.0001.1. The formation should look like Figure 3.

Figure 3.



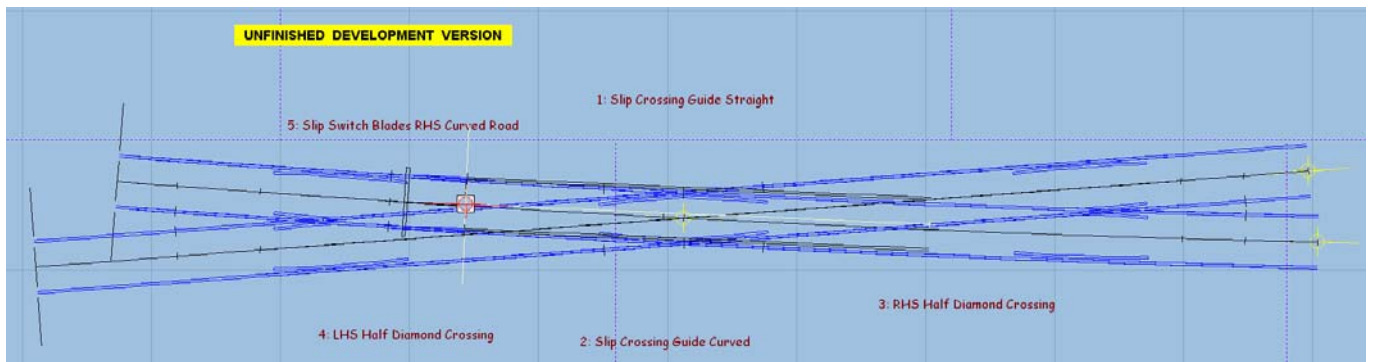
- 3.0002. Now use **< template >**
 - ↳ **< switch options... >**
- 3.0002.1. When window opens, scroll down to,
- 3.0002.2. **< BH or FB 1:32 (B) switch for 1:7 slip >** (or if you wish another ratio select that) and click OK.
- 3.0002.3. The formation should now look like Figure 4.

Figure 4.



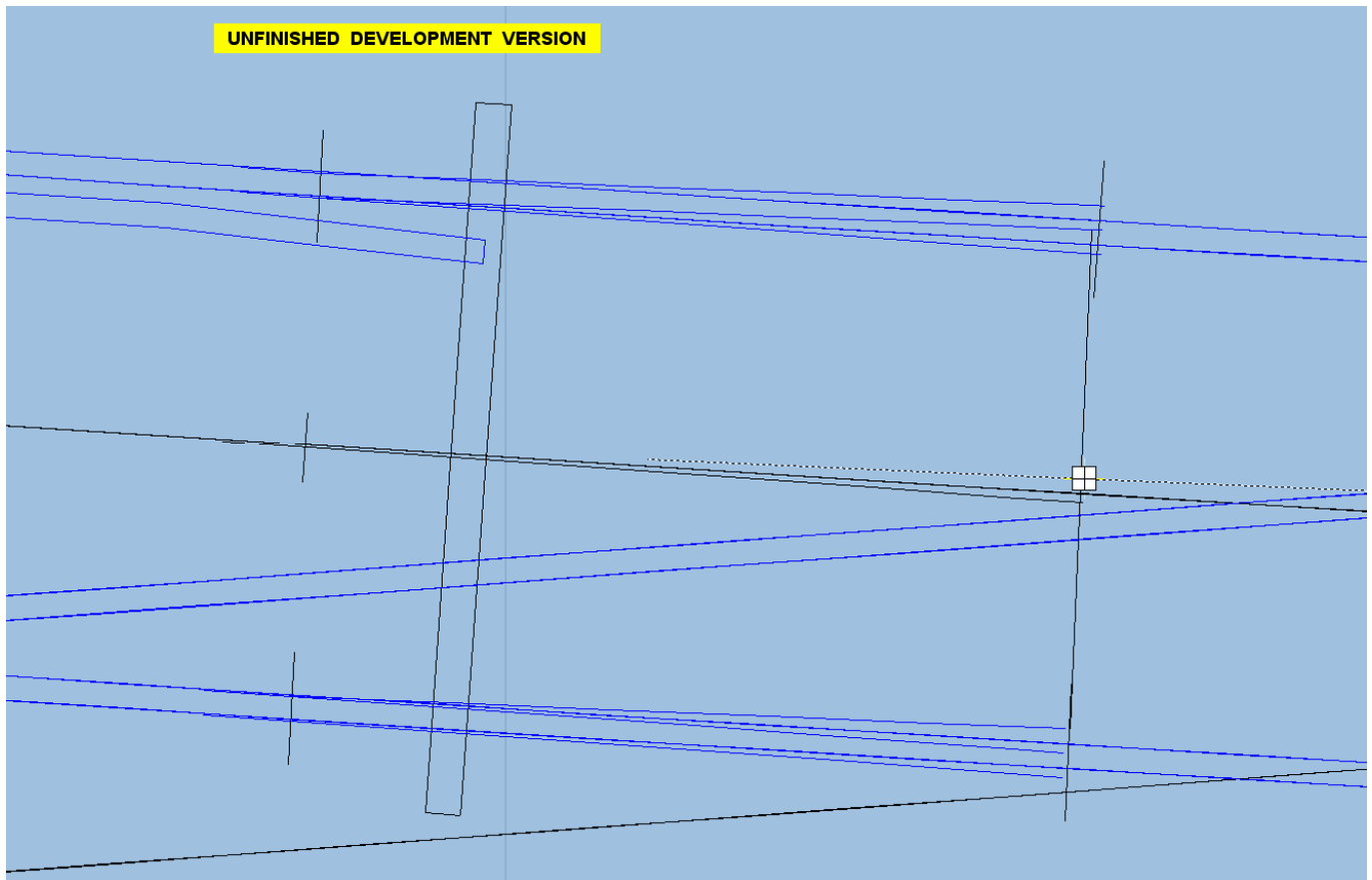
- 3.0003. Click on the **Slip Crossing Guide Curved** and from the dropdown menu
- 3.0003.1. Select **< P peg/align tools >**
↳ **< S snap the control template onto background template >**
↳ **< at MCP >**
- 3.0004. Now select **< tools >**
↳ **< make slip road >**
- 3.0004.1. The formation should now look like Figure 5.

Figure 5.



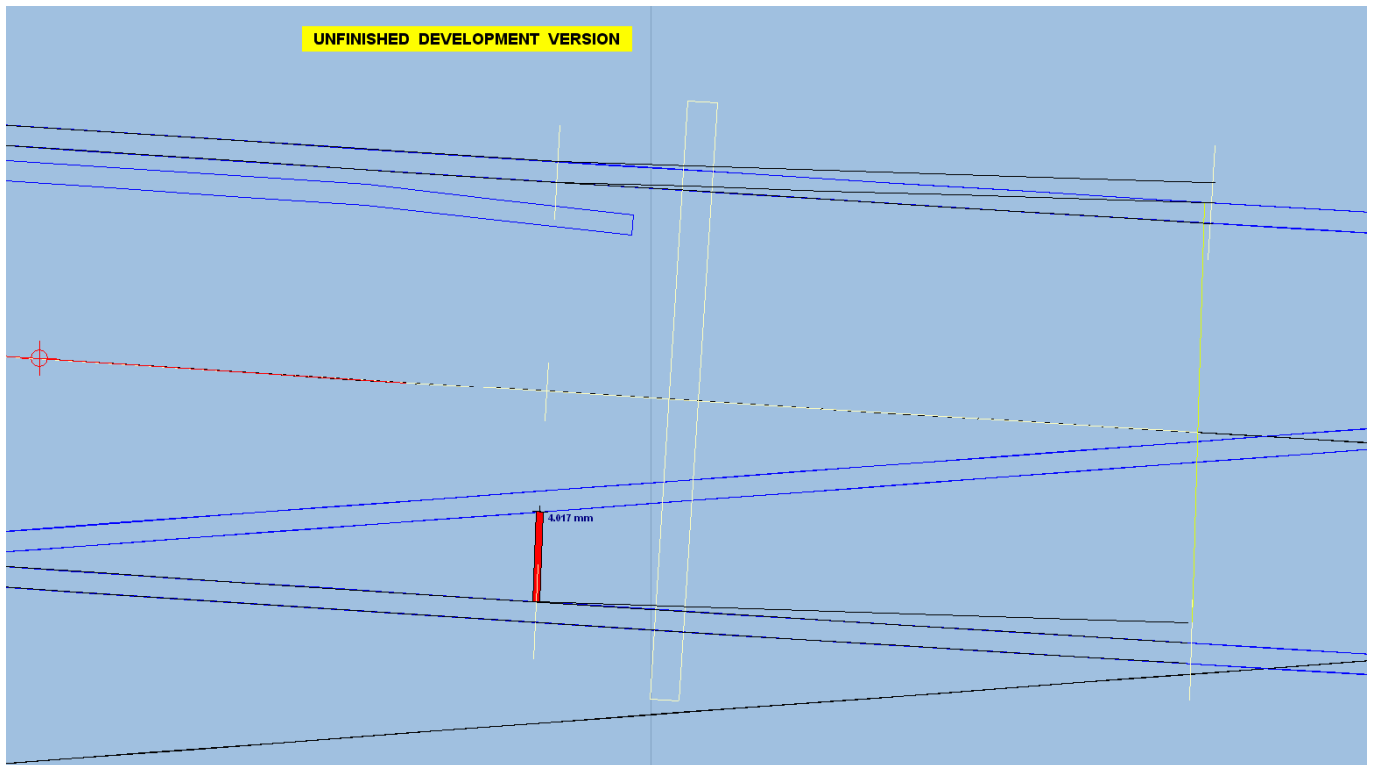
- 3.0004.2. Now Press the **HOME** key to remove slip road rails as these are not required at this stage (the switch blades have already been automatically stored).
- 3.0004.3. You will need to rename the switch blade template to say, **Slip Switch Blades RHS Curved Road**
- 3.0005. You will note, that the switch blades do not align with the guide rails or the diamond crossing rails, and it is the wrong hand, See Figure 6, this has now to be corrected.

Figure 6.



- 3.0005.1. Click on the **Slip Switch Blades RHS Curved Road** template and in the dropdown menu, **Wipe to the control** then,
- 3.0005.2. Select **< geometry >**
 - ↳ **< peg positions >**
 - ↳ **< reset peg on datum (CTRL-0) >**.
- 3.0006. Click on the **Slip Crossing Guide Curved** and from the dropdown menu
- 3.0006.1. Select **< P peg/align tools >**
 - ↳ **< K align control template over, and snake onto peg >**
 - ↳ **< facing – trailing >** from the popup menu.
- 3.0006.2. Repeat this again (repeat instruction 3.0006.1.) because handing was wrong above.
- 3.0006.3. Next, use **CTRL + F6 < snake through peg >** and move the switch blade template until you reach the position you require.
- 3.0006.4. At this point it is necessary to check and measure the blade clearance between the diverging rails of the Vee knuckle. The recommended gap allowing both the two blades to be fully open is 12" prototype (4 mm at P4 gauge scale). I usually pre-set the ruler to measure this gap and then leave it in position so that I can then snake up to the ruler. See Figure 7.
- 3.0006.5. If the gap is not quite right, then continue to snake using **CTRL + F6** in the appropriate direction until the correct gap point is reached. See Figure 7.

Figure 7.



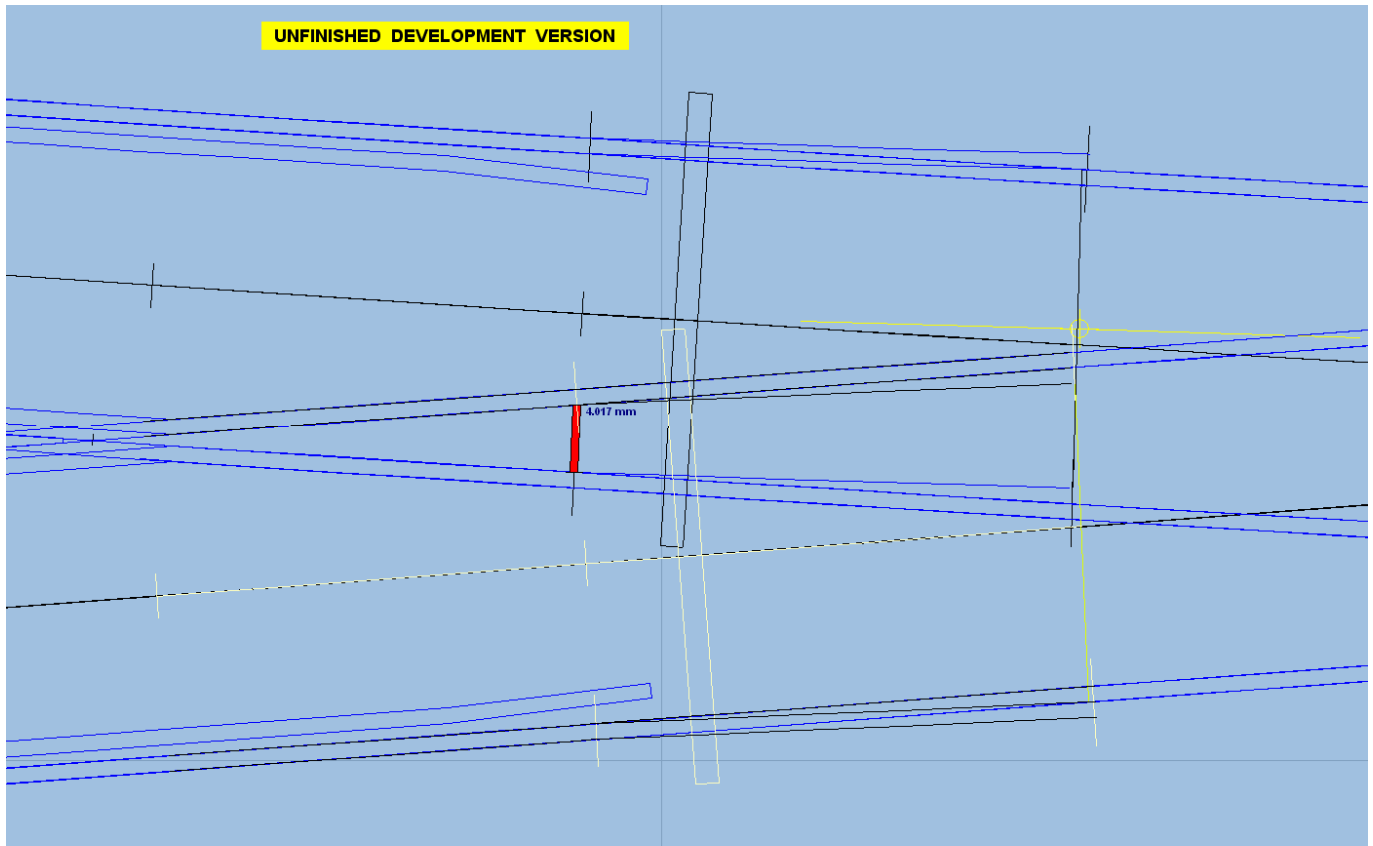
- 3.0006.6. Ignore the Vee check rails being in the way at present, these can be dealt with later.
- 3.0006.7. Now select [< geometry >](#)
 - ↳ [< peg positions >](#)
 - ↳ [< peg on end of planing >](#).
- 3.0006.8. This peg position is needed later to add and align the slip road stock rails.
- 3.0006.9. Now [Store & Background](#) this template.
- 3.0006.10. rename the stored template to say, [Slip Switch Blades RHS Curved Road](#).

STEP 4.

- 4.0001. Click on the switch blade template just stored, [Slip Switch Blades RHS Curved Road](#) and in the dropdown menu, select [copy to the control](#) then,
- 4.0002. Select [< geometry >](#)
 - ↳ [< peg positions >](#)
 - ↳ [< reset peg on datum \(CTRL-0\) >](#).
- 4.0003. Click on the [Slip Crossing Guide Straight](#) and from the dropdown menu
- 4.0003.1. Select [< P peg/align tools >](#)
 - ↳ [< K align control template over, and snake onto peg >](#)
 - ↳ [< facing – trailing >](#) from the popup menu.

- 4.0003.2. Next, use **CTRL + F6 < snake through peg >** and move the switch blade template until you reach the position in the opposite road adjacent to the first switch blade position. See Figure 8.

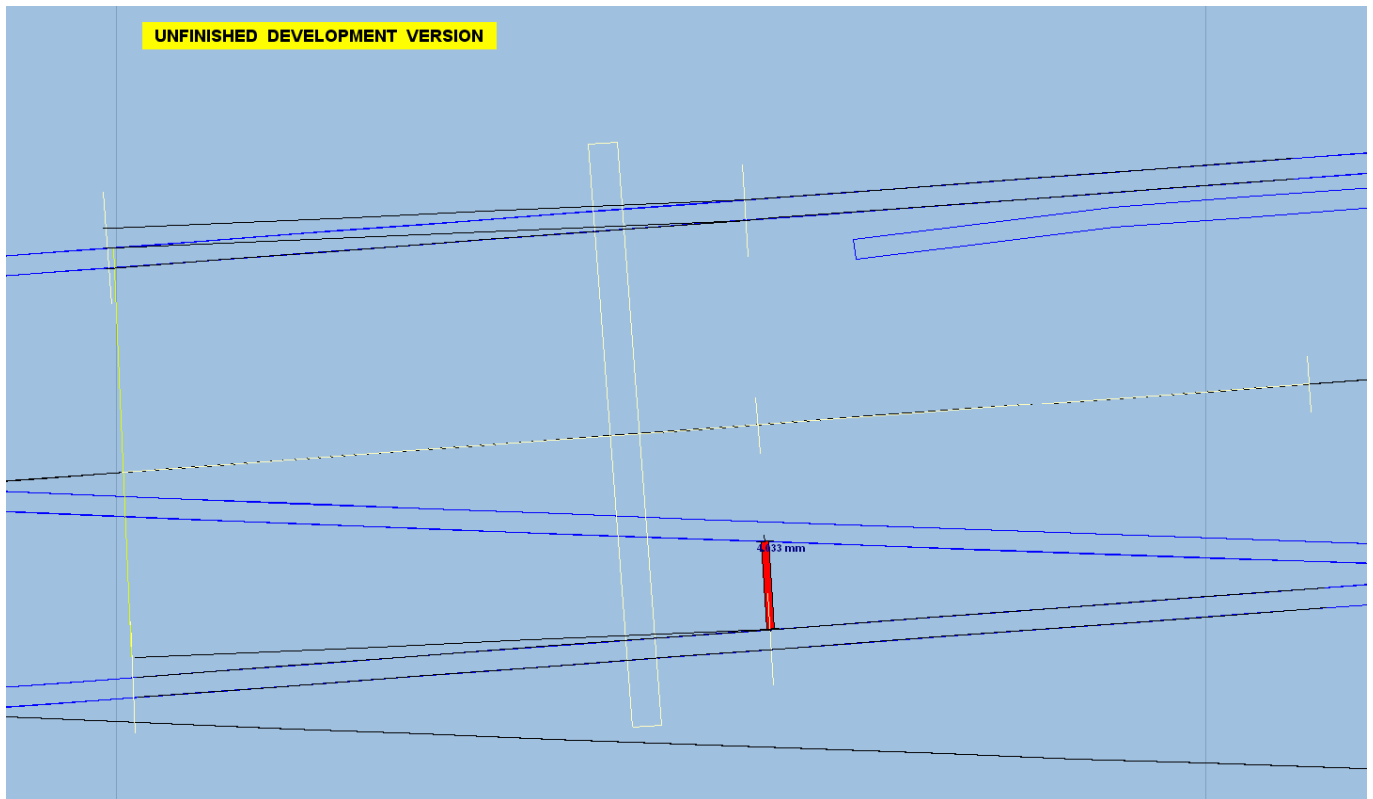
Figure 8.



- 4.0004. Now select **< geometry >**
↳ **< peg positions >**
↳ **< peg on end of planing >**.
- 4.0005. Now **Store & Background** this template.
- 4.0005.1. Rename the template just stored to say, **Slip Switch Blades RHS Straight Road**
- 4.0006. Click on the switch blade template just stored, **Slip Switch Blades RHS Straight Road** and in the dropdown menu, select **copy to the control** then,
- 4.0007. Select **< geometry >**
↳ **< peg positions >**
↳ **< reset peg on datum (CTRL-0) >**.
- 4.0008. Click on the **Slip Crossing Guide Straight** and from the dropdown menu
- 4.0008.1. Select **< P peg/align tools >**
↳ **< K align control template over, and snake onto peg >**
↳ **< facing – facing >** from the popup menu.
- 4.0009. Next, use **CTRL + F6 < snake through peg >** and move the switch blade template until you reach the position you require.

- 4.0009.1. Again at this point it is necessary to check and measure the blade clearance between the diverging rails of the Vee knuckle. The recommended gap allowing both the two blades to be fully open is 12" prototype (4 mm at P4 gauge scale). I usually pre-set the ruler to measure this gap and then leave it in position so that I can then snake up to the ruler. See Figure 9.
- 4.0009.2. If the gap is not quite right, then continue to snake using **CTRL + F6** in the appropriate direction until the correct gap point is reached. See Figure 9.

Figure 9.

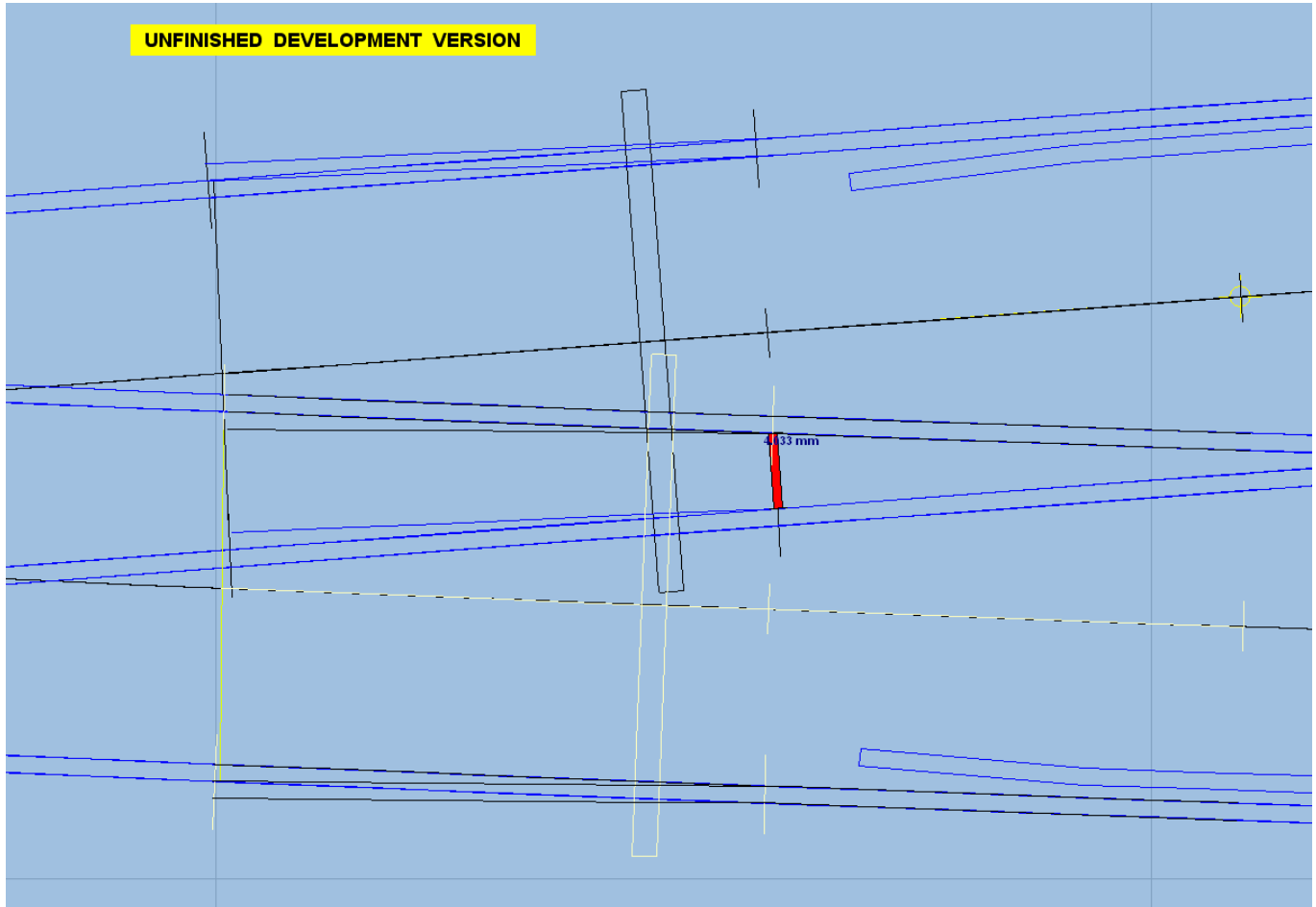


- 4.0010. Select **< geometry >**
 ↳ **< peg positions >**
 ↳ **< reset peg on datum (CTRL-0) >**.
- 4.0011. Now **Store & Background** this template.
- 4.0011.1. Rename the template just stored to say, **Slip Switch Blades LHS Straight Road**
- 4.0012. Next Click on the switch blade template just stored, **Slip Switch Blades RHS Curved Road** and in the dropdown menu, select **copy to the control** then,
- 4.0013. Select **< geometry >**
 ↳ **< peg positions >**
 ↳ **< reset peg on datum (CTRL-0) >**.
- 4.0014. Click on the **Slip Crossing Guide Curved** and from the dropdown menu
- 4.0014.1. Select **< P peg/align tools >**
 ↳ **< K align control template over, and snake onto peg >**

↳ < facing – facing > from the popup menu.

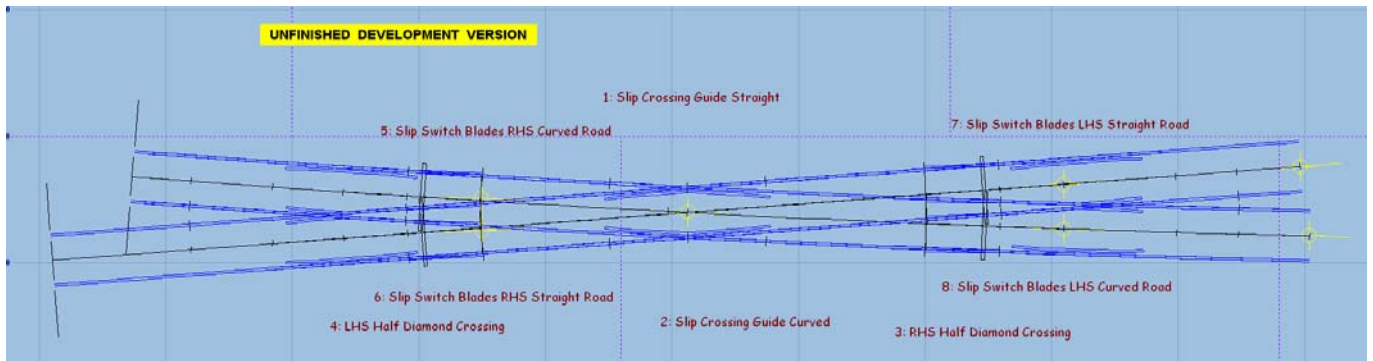
- 4.0014.2. Next, use **CTRL + F6** < snake through peg > and move the switch blade template until you reach the position in the opposite road adjacent to the last switch blade positioned. See Figure 10.

Figure 10.



- 4.0015. Select < geometry >
↳ < peg positions >
↳ < reset peg on datum (CTRL-0) >.
- 4.0016 Now **Store & Background** this template.
- 4.0016.1. Rename the template just stored to say, **Slip Switch Blades LHS Curved Road**
- 4.0016.2. The formation should now look like Figure 11.

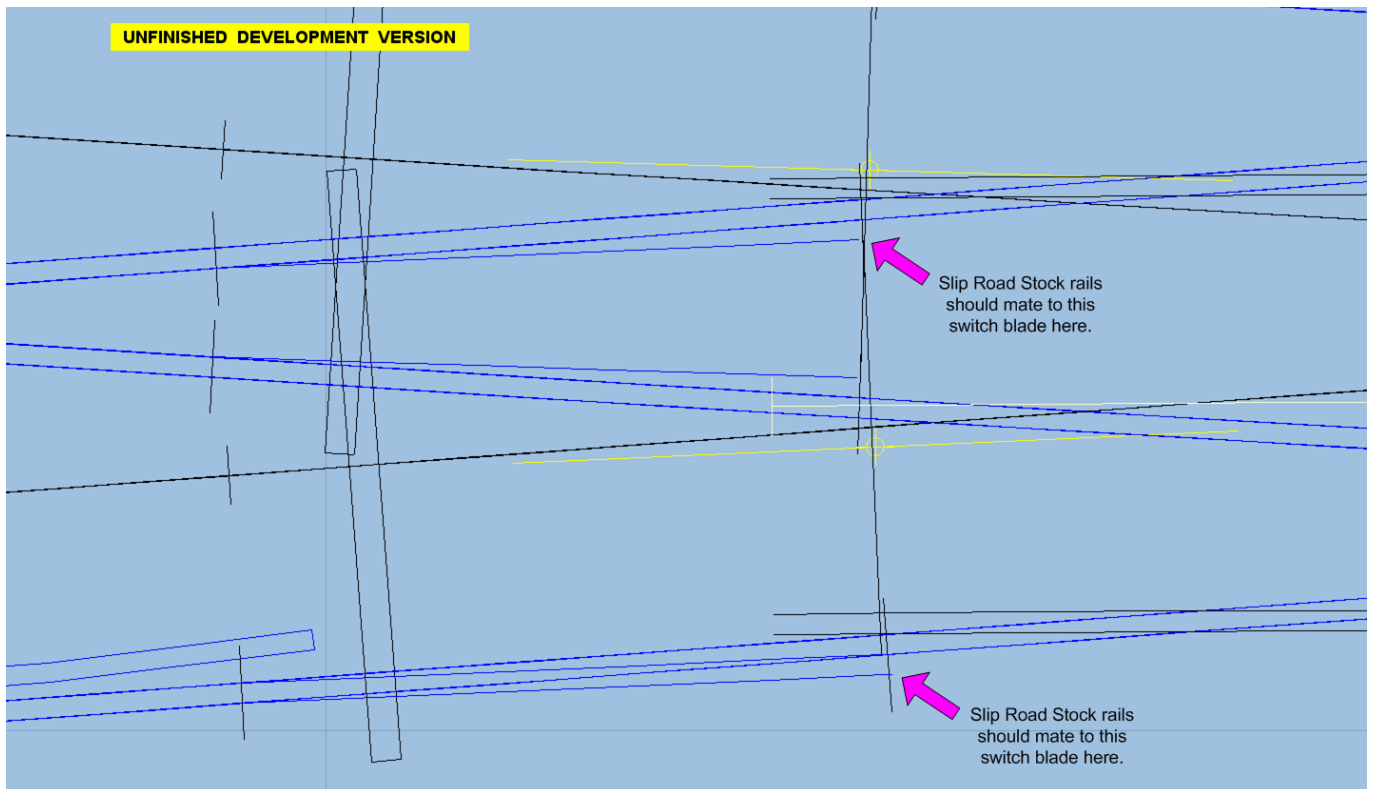
Figure 11.



STEP 5.

- 5.0001. At this stage, all switch blades have been accurately positioned, now we need to add the slip road stock rails and then tidy up.
- 5.0002. Now select [< tools >](#)
↳ [< make slip road >](#)
- 5.0002.1. Now align the Right Hand side of the slip road end to mate into the switch blades of the switch “[Slip Switch Blades RHS Straight Road](#) “ using a combination of [F6 curving](#) and [F4 overall length](#). You will need to zoom in to do this accurately. See Figure 12.

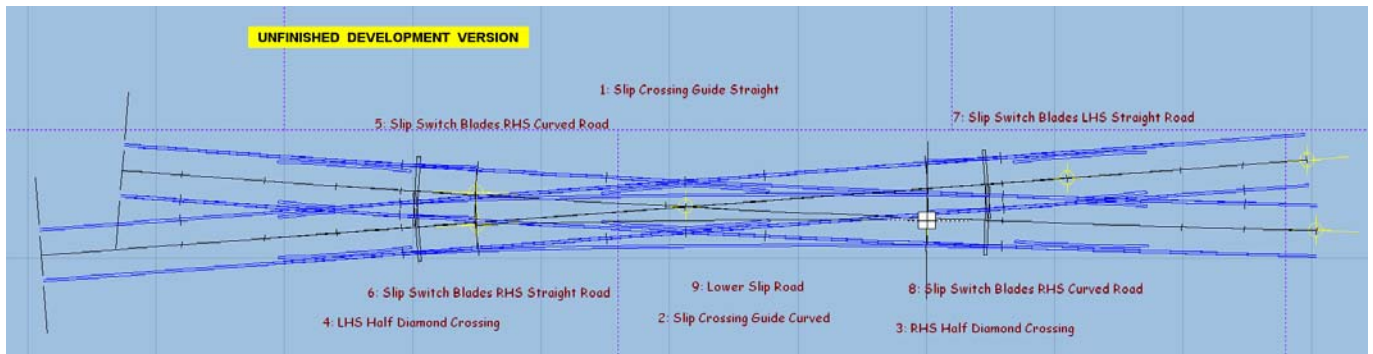
Figure 12.



- 5.0003. Now [Store & Background](#) this Slip Road template.
- 5.0004. Rename the template just stored to say, [Lower Slip Road](#).

5.0004.1. The formation should now look like Figure 13.

Figure 13.



5.0005. Next Click on the switch blade template just stored, **Slip Switch Blades RHS Curved Road** and in the dropdown menu, select **copy to the control** then,

5.0006. Now select **< tools >**

↳ **< make slip road >**

5.0006.1. Now align the Left Hand side of the slip road end to mate into the switch blades of the switch “**Slip Switch Blades LHS Straight Road**” using a combination of **F6 curving** and **F4 overall length**. You will need to zoom in to do this accurately. Similar to that shown in Figure 12, but on the other side of the diamond.

5.0007. Now **Store & Background** this Slip Road template.

5.0008. Rename the template just stored to say, **Upper Slip Road**.

5.0008.1. The formation should now look like Figure 14.

Figure 14.



STEP 6.

6.0001. We now just need to tidy up the check rails of the vee, which may interfere with the Right Hand Side blade operations.

6.0002. Click on **LHS Half Diamond Crossing** and from the dropdown menu select **< wipe to the control >**.

6.0003. Now select **< real >**

↳ **< V-crossing options >**

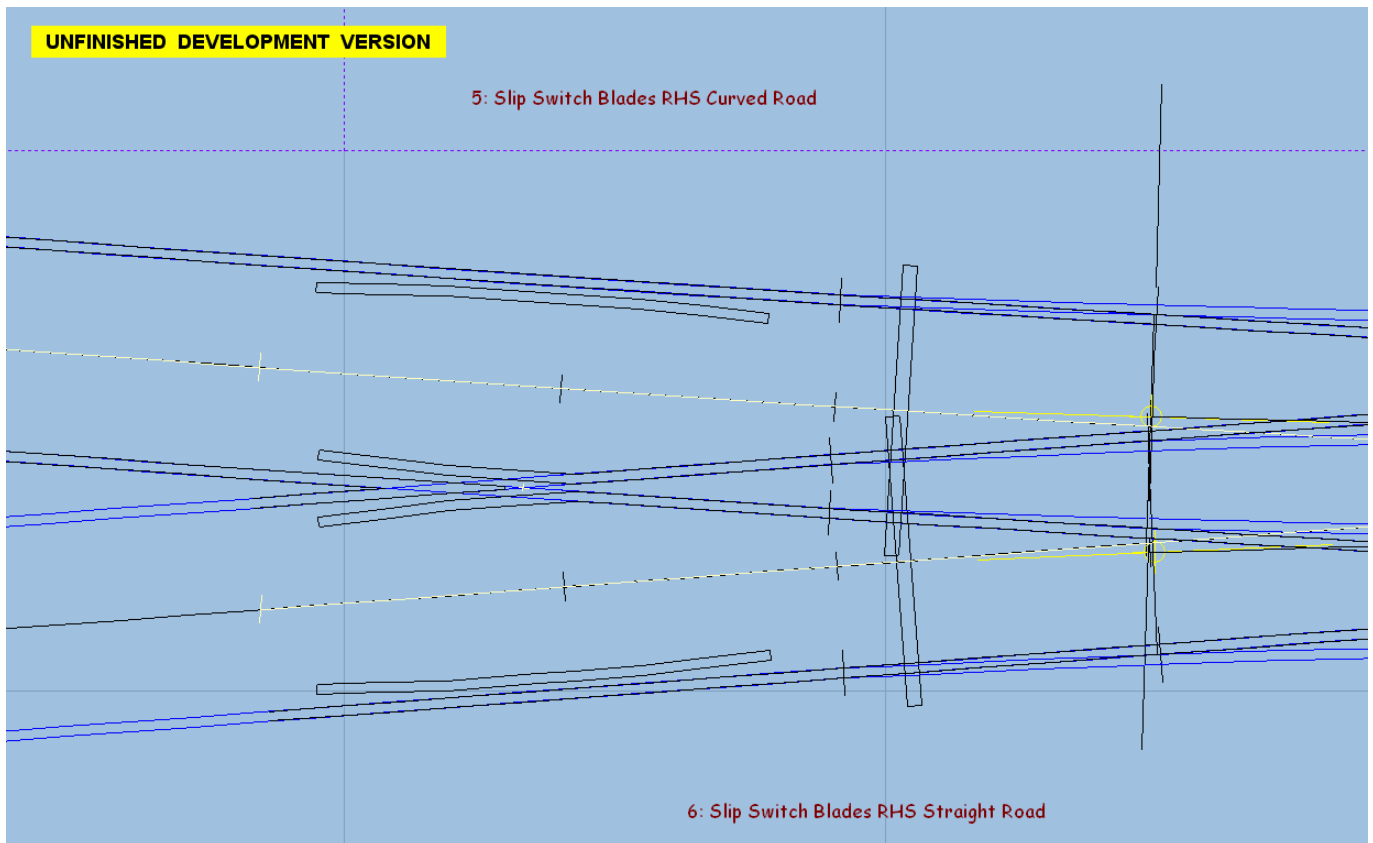
↳ < customize V-crossing >

↳ < half diamond check rails >

↳ < both check rails shortened (for double slip) >

- 6.0003.1. This will clear the Vee check rails away from the switch blades, as shown in Figure 15.

Figure 15.



- 6.0004. Now **re-store & background** the half diamond template.
- 6.0005. The final job of construction is to remove the two guide rails.
- 6.0006. Now select **< main >**
- ↳ **< storage box ... (CTRL+B) >**.
- 6.0006.1. When box window opens, locate the correct template numbers or titles.
- 6.0006.2. Use the **Left - Right** arrows to locate the correct template numbers (or titles) of the two guide rails,
- 6.0006.3. Then click **wipe from the background** for each of the two templates.
- 6.0007. You can now remove any unused templates in the storage box if you wish.
- 6.0008. You now only need to do the timbering, this is not yet covered in this tutorial.