


After my 5 minutes explanation of how this image was created, let me explain it in more detail.

The two images that I used for this example are *porec.jpg* and *san\_lorenzo.jpg*. Follow the photoshop document *2d\_reconstruction.psd* that is in the folder by selecting the appropriate layer for every step mentioned below.

I started working from the *porec.jpg* file but saved it as a photoshop document first (*2d\_reconstruction.psd*) in order not to lose the original image.

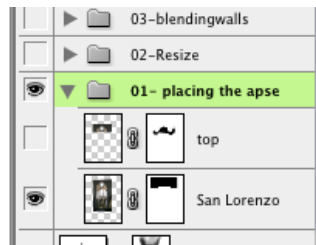
Remember that you can zoom in to get a better view of what you are working on using the Zoom Tool (z). The cursor will change to a magnifier glass with a “+” in the middle to zoom in. In order to zoom out, hold alt/option while clicking. 

1. Layer: ***Straighten perspective.***


If the perspective of the image is wrong, it can be changed by selecting the layer, and going to Edit > Layer > Transform > Perspective.

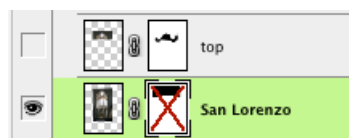
**Folder: 01-Placing the Apse**

To see the layers inside the folder, click on the arrow situated to the right of the eyeball.



2. Layer: ***San Lorenzo.***

Open *san\_lorenzo* image. With the selection tool,  select the apse, copy and paste it in the new document. Since the apse does not fit in the space left in *porec*, duplicate the layer (top). To layer *San Lorenzo*, erase part of the top with a layer mask. Make sure that the layer mask is selected if you don't want to erase the actual image. To understand the effect of the layer mask on the image, you can block it temporarily by selecting the layer mask while holding “Shift”.



Layer Mask selected



Layer selected

3. Layer: **Top.**  
Erase the bottom part of the image and move it down to adjust it to the new space. Use a layer mask and the eraser tool with a soft brush to blend it with the layer below.

In order to create a backup, duplicate the folder below by right clicking on the folder/layer and select "Duplicate Layer".

### **Adjustment Layers**

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4. Adjustments Layers: **Levels 1 and Hue and Saturation.**  
These layers were created to try to match the color and contrast of *porec* with the *San Lorenzo image*. Adjustment layers affect any layer below. It is possible to change the settings at any time. In order to affect only the background, adjustment layers should be situated below folder 01.

### **Folder: 02-Resize**

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5. Layer: **Result from 01.**  
For the next steps, the layers in the duplicated *folder 01* have to be merged. To convert the folder into one single layer, select the folder and go to Layer > Merge Group (Comm + E). Hide *folder 01*. Use a Layer Mask to erase the unnecessary parts in the new layer. Duplicate the layer as a backup.
6. The following layers within this folder show the small touches made to improve the apse by using the transform tool, stamp tool, and copying parts of the image to replace others (for instance, layer *stairs right*).

Duplicate this folder as a backup.

### **Folder: 03-Blending Walls**

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7. Layer: **Result from 02.**  
Merge the duplicated *folder 02* to create a single layer.
8. Layers: **Wall left, wall right.**  
These two layers are part of the background image (*porec.jpg*). With the Lasso Tool or Polygon Lasso Tool, select a portion of the image, copy and paste it into a new layer. Then, using a layer mask and the eraser tool, blend it together with the apse.



Duplicate this folder as a backup.

## Rest of Layers

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9. Layer: **Result 03 with contrast.**

Merge the duplicated *folder 03* to create a single layer.

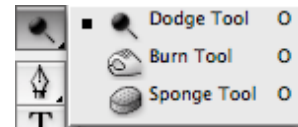
Add some contrast to the layer by going to Image > Adjustments > Levels or Brightness and Contrast.

10. Layer: **Darker background.**

To perfect the blending of the two images, go back to the *Straighten perspective* layer. Darken the walls close to the apse using the Burn Tool.

11. Layer: **Highlight on stairs.**

Duplicate the previous layer and create a bit of highlight on the stairs with the Dodge Tool.



12. Layer: **Final Image.**

Go to Select > All (Comm + A) to select the whole image. Go to Edit > Copy Merge (Shift + Comm + C) in order to copy all the layers at once and paste the selection. Go to Edit > Paste (Comm + V) to paste the result into a new layer.

13. Layer: **Blur – added.**

Duplicate *Final Image* and add a Blur Filter: Filter > Blur > Gaussian Blur with radius 3. In order to focus on the apse, create a Layer Mask on the layer and use the biggest brush to erase the center. This way the original sharper layer is revealed in the center, adding depth of field.

14. Layer: **Noise-added.**

Follow step 12 and then add a noise Filter by going to Filter > Noise > Add Noise with radius 3.

15. Layer Adjustment: **Levels to lighten.**

If the image is too dark or light, use Levels Layer Adjustment.

16. Follow step 12 to create **THE END.**