



2. PHOTOSHOP MANUAL

Creating background assets for V-Author™ using Adobe Photoshop®

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TRADEMARKS

Product names used in this manual are ascribed to their respective owners and acknowledged.

ASSUMPTIONS

Some assumptions are made when using this document. For example most steps take place assuming that the user is at the desktop and the application is not open. This provides the user with the cleanest explanation of the steps to produce a specific effect. This manual is to be used as a “specific case” tool, not to provide the user with a complete A-Z how-to.

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I. INTRO TO PHOTOSHOP

Welcome to the wonderful world of Photoshop. This section covers the basics of how to navigate around Photoshop. The intent of this section is to introduce the features of the Photoshop interface and define a few terms I'll use throughout this manual.

1.1 ELEMENTS OF THE INTERFACE

Once you have opened the application, the Photoshop interface will appear. There are many complex elements of the interface, and for reasons of both saving space in this manual and keeping things basic, I'll only show you the toolbars and options panes you need to perform the most basic tasks in Photoshop. If you ever notice that some of these elements are missing, simply go to the window menu and select them.

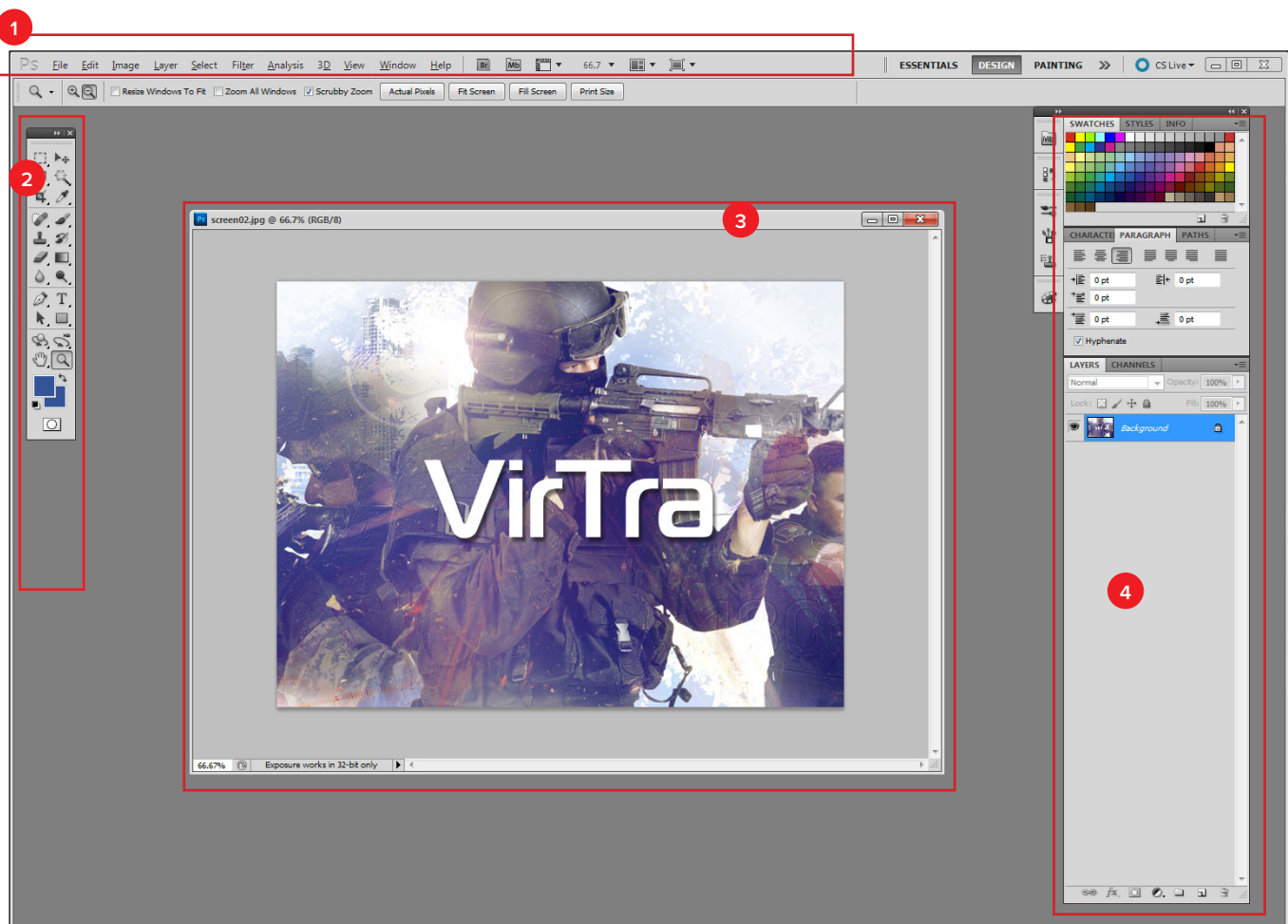


Fig: 1 - Elements of Photoshop interface

1. Menu
2. Tool Bar
3. Workspace
4. Panel

1.12 Menu

Menus are probably the most familiar interface elements to a new Photoshop user. They contain all sorts of options, but since they're not as visible as Panel or the toolbar, they are often only partially explored. I'll take time right now to go over the menus and give a brief description to orient you to each.

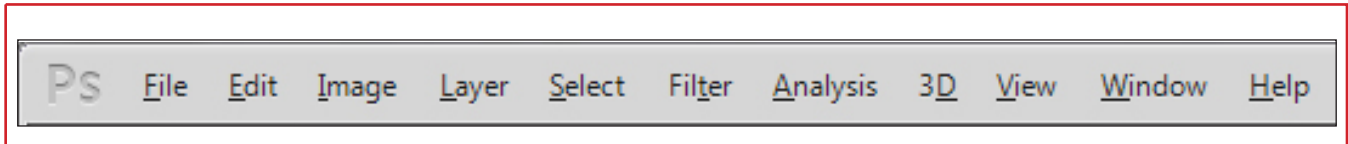
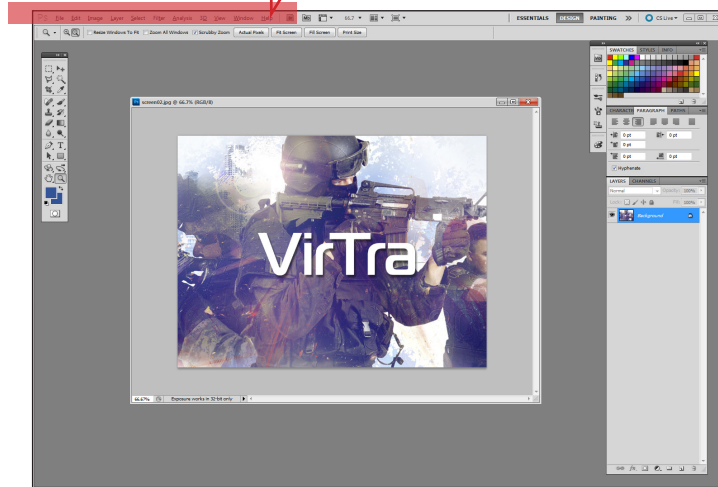


Fig: 2 - The Menu bar



FILE allows you to Open, Save, Import, Export files.

EDIT is another familiar menu. In Photoshop, edit houses all of the expected options as well as Fill & Stroke, and other image-altering functions.

Items on the **IMAGE** menu effect a whole image, for the most part. Here you'll find color adjustments, size adjustments, and any other changes you need to make globally when working with a Photoshop file.

The **LAYER** menu is similar to the image menu, but it contains options that effect only current or selected layers. Options in the Layer menu affect these pieces of the image rather than the complete image.

The **SELECT** menu deals with selections you make. Selecting the specific parts of an image you'd like to alter is a difficult part of working in Photoshop. This menu gives you some options regarding selections, including the ability to save selections, reverse them, or add to them. Learning the options on the selection menu can really save you some time.

The **FILTER** menu is probably what most people imagine when they think about Photoshop. The filter menu allows you to apply filters to any part of your image. These filters include ways to change the texture of the image, with some potentially radical results.

The **VIEW** menu is where you change the view settings. You can use this to show and display guidelines on the image, and to zoom in and out, among other things.

The **WINDOW** menu allows you to toggle back and forth between hide and show for each interface element. This is the first place you should go if you lose track of a particular window while you're working.

Last and not least, of course, is the **HELP** menu. You need online connection to access the help and tutorial portion of Photoshop.

<http://helpx.adobe.com/indesign/topics.html>

1.13

Toolbar

Perhaps the most important element of the Photoshop interface is the Toolbar. It contains a bunch of icons that represent the different tools Photoshop offers to alter and create images. These include tools for selecting specific areas of images, changing the colors of the image, transforming, and erasing parts of an image, and many more. To get an idea of what some of these tools can do, mouse over the icons and you'll get an explanatory tool tip. For the purpose of this manual, we will focus only on the PEN, MOVE, and PAN tool.

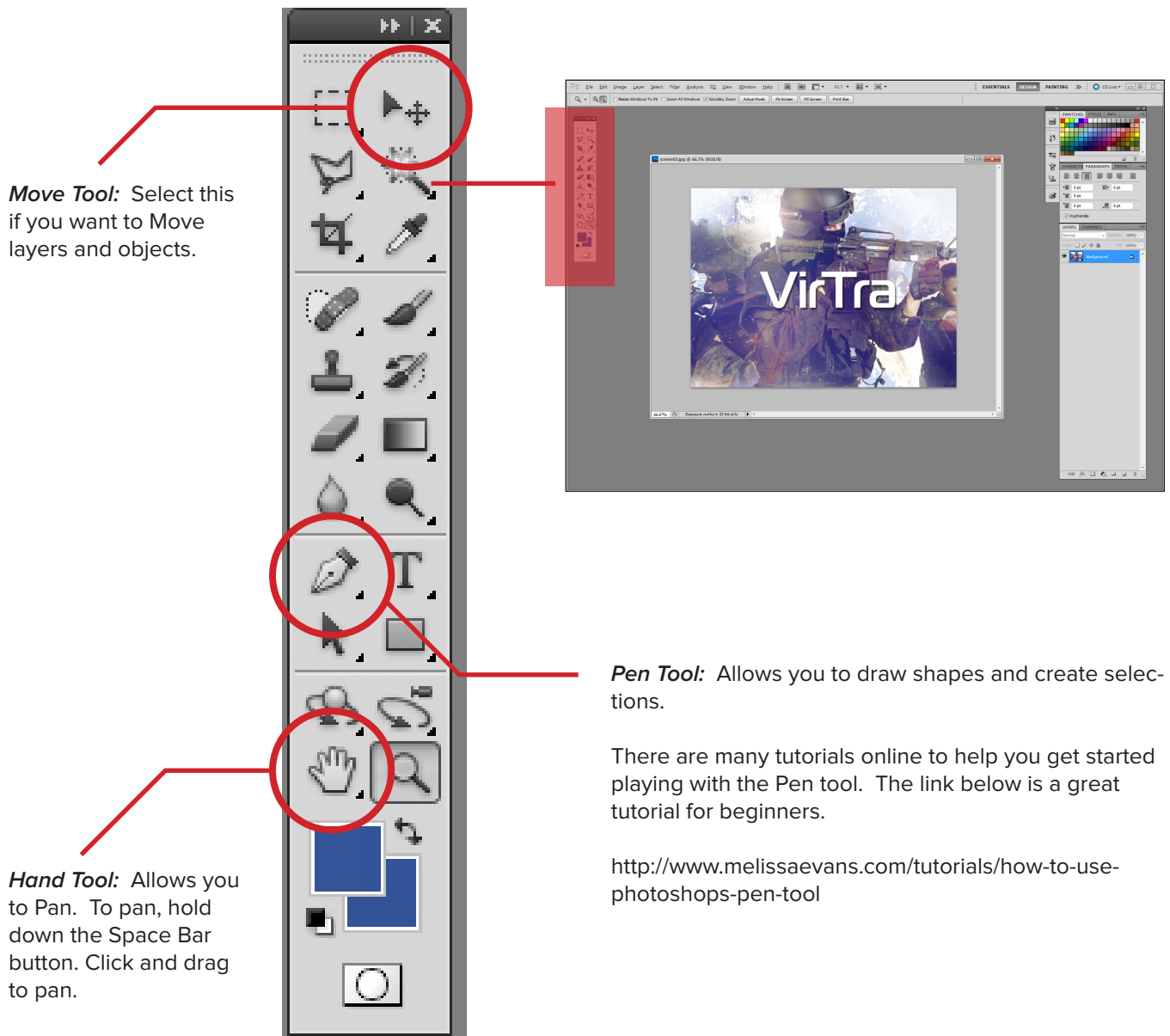


Fig: 3 - Toolbar with the Pen, Move, Pan tool circled

1.14 Workspace

This is the current document window. You can have multiple workspaces/windows open in Photoshop. The active window will be highlighted to indicate which file you're working on.

A workspace can either be Stacked or on a Tab display.

Use the Move tool located on the Toolbar to separate or merge workspaces together. See Fig. 6 below.



Fig: 6- Move Tool

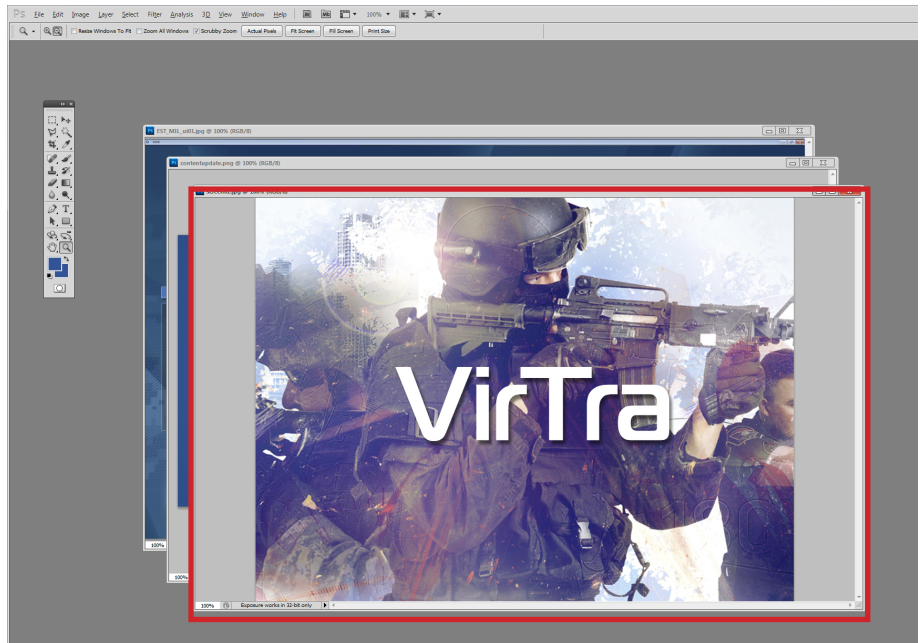


Fig: 4- Stacked workspaces.

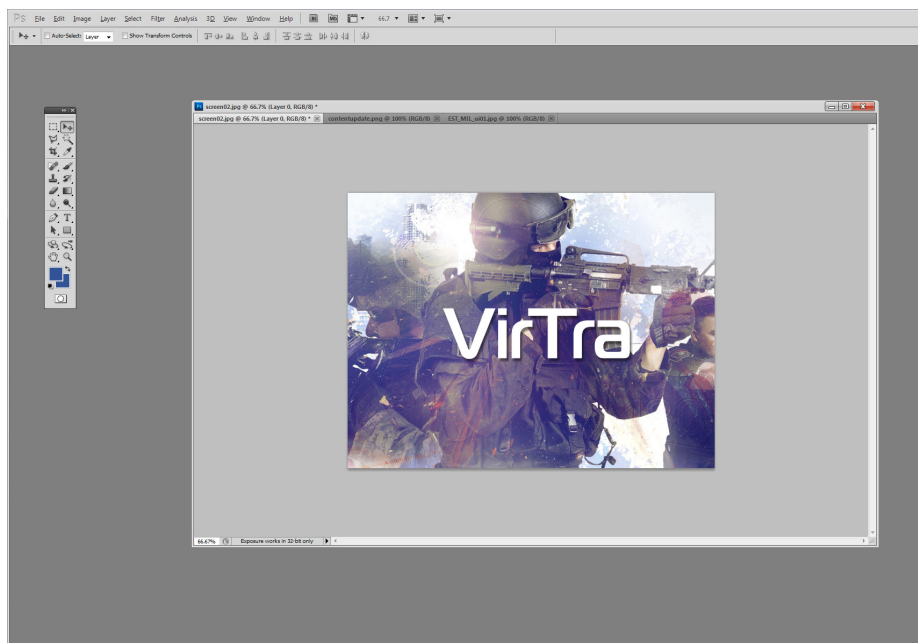
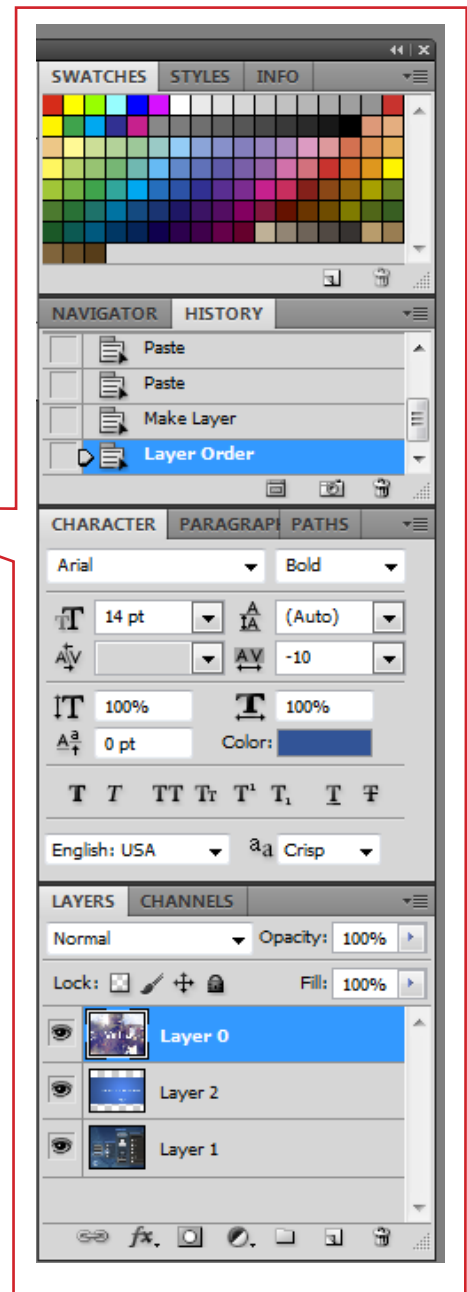
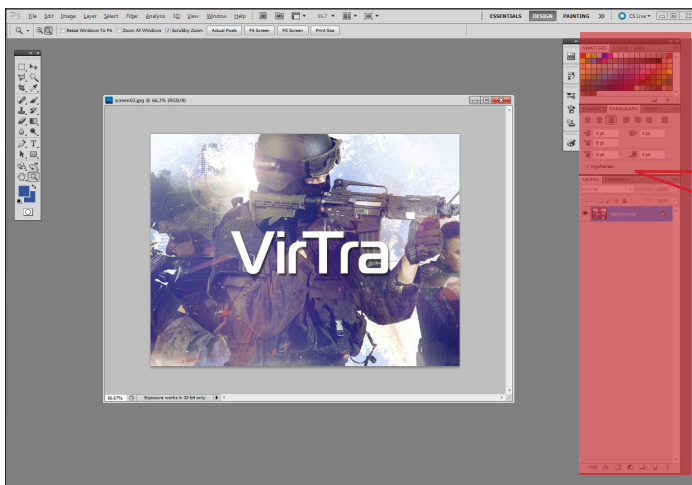


Fig: 5- Tabbed workspaces.

1.15 Panels

Panels are also important features of the Photoshop interface. All sorts of information is displayed in these panels, and therefore they can get a little confusing. They display location information, tool options, and history, among other things. If you ever lose track of a specific panel (they tend to stack up), go to the windows menu and select that panel to view it. It's important to understand that not all panels will look the same. The users can pick and choose their Options and Windows based on their needs but for this tutorial let's focus mainly on the **LAYERS** panel.



Layers

In plain and simple terms, a layer is an image stacked on top of another. Imagine an onion with its many layers of skin.

Visit the link below for a beginners introduction to using layers in Photoshop:

<http://www.photoshopessentials.com/basics/layers/layers-intro/>

Fig: 7- Panel

1.2 COMMON PHOTOSHOP KEYBOARD SHORTCUTS

There are many keyboard shortcuts that exist in Photoshop and most are pretty universal such as cutting and pasting objects. As you continue to progress with the software, you will learn new tricks and shortcuts that will help you speed up your workflow. Below are just some of the most basic Photoshop shortcuts to get you started.

P	Pen
V	Move
H	Hand Tool
Z	Zoom
Ctrl + C	Copy
Ctrl + V	Paste
Ctrl + Z	Undo
Ctrl +Alt + Z	Undo multiple times
Ctrl + T	Transform

1.3 ADDITIONAL PHOTOSHOP HELP

We understand that there are far better tutorials that already exist online-- no sense in reinventing the wheel! We gave you the basics to get you started but to fully grasp the power of this program, we urge you to visit Adobe's Photoshop help community:

http://helpx.adobe.com/photoshop/topics.html#dynamicpod_reference_0

II. CREATING BACKGROUND OVERLAYS IN PHOTOSHOP

2.1 LOCATING THE OVERLAY TEMPLATE

- Let's start by locating the **2. Photoshop Manual** section and opening the **"Overlay.psd"** file located in Your Project 01 folder under Overlay.

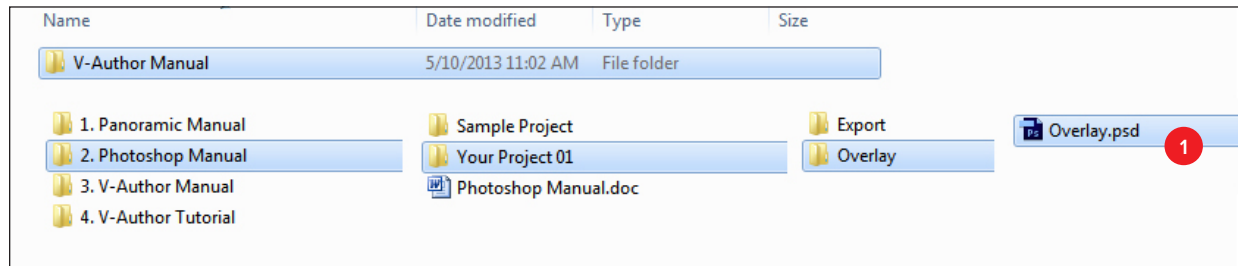


Fig: 8 – Locating the Overlay Template

Double click this file and Adobe Photoshop will open and load the project. This photoshop file is the template you will use to import your panoramic stitch, rescale and create your background overlays.

- Once the file has opened, choose File, Place from the Menu bar. Then locate your panoramic stitch you made earlier and select Place.

- Once your stitch appears in the document, you will want to scale it to fit within the boarders of the project. If you place your cursor to the corner of the photo, you will notice a diagonal arrow icon appear.

- From there, click and drag, holding the **SHIFT** key to scale until it fits within the document or until it fills in all the white space. Once complete, press **ENTER** on the keyboard to lock it in place. If you want to change it after this point, you may do so by selecting Edit, Transform, Scale from the top menu bar or using the keyboard shortcut **CTRL + T**.

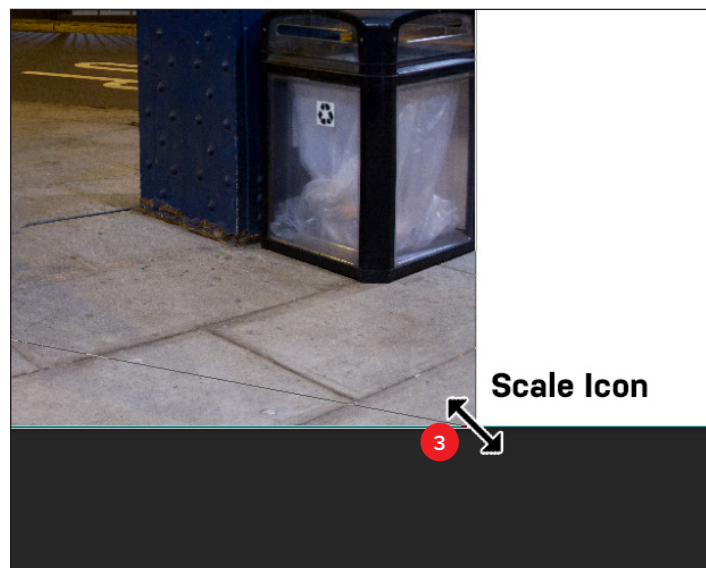


Fig: 9 - Scaling the stitch

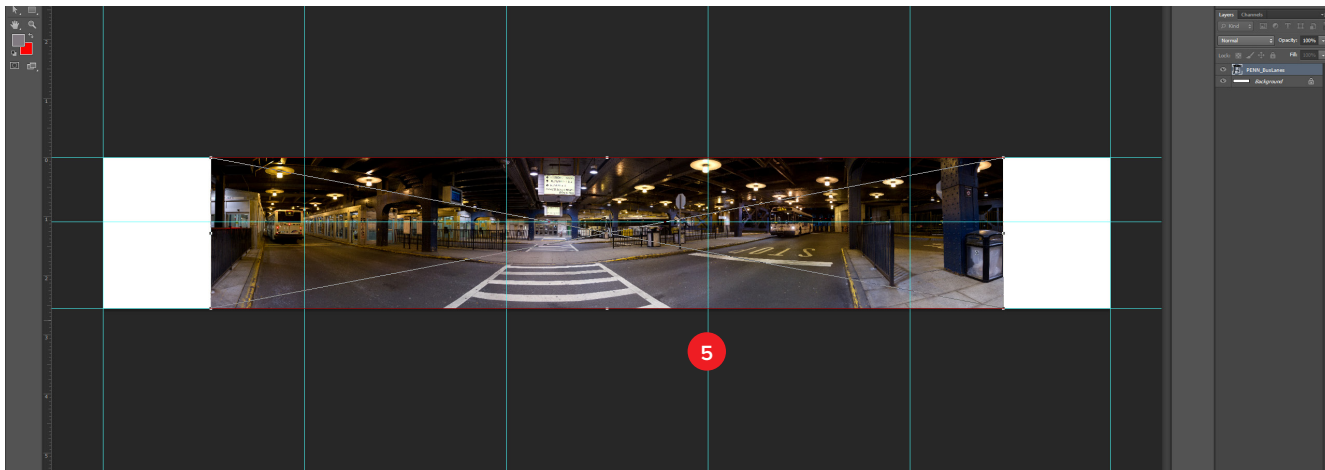


Fig: 10 - Vertical guidelines act as a visual representation for each of the screen in the simulator.

- Notice the guidelines created within this document as well. Six vertical lines and one horizontal line. The vertical lines define the region for each screen of the simulator. The horizontal line is used to position background height. Rule of thumb is to place the horizon line of the background on or near the horizontal guide line.

- Notice your imported pano will also appear in the Layers panel to the right.
- Select the layer and drag it down to the **“Background”** folder at the bottom of the stack.
- Click the arrow on the **“Background”** layer to expand it and see what’s inside. You’ll notice a blank white layer inside here named **“Layer 0”**. Select it and hit **“Delete”** or **“Backspace”** on the keyboard to delete it.
- Once you have your pano layer selected, you can click and drag it to reposition it within the workspace. Make sure the **Move** tool is selected from the Toolbar panel.



Fig: 12 - Select the Move tool to manipulate the layer orders in the layer panel.

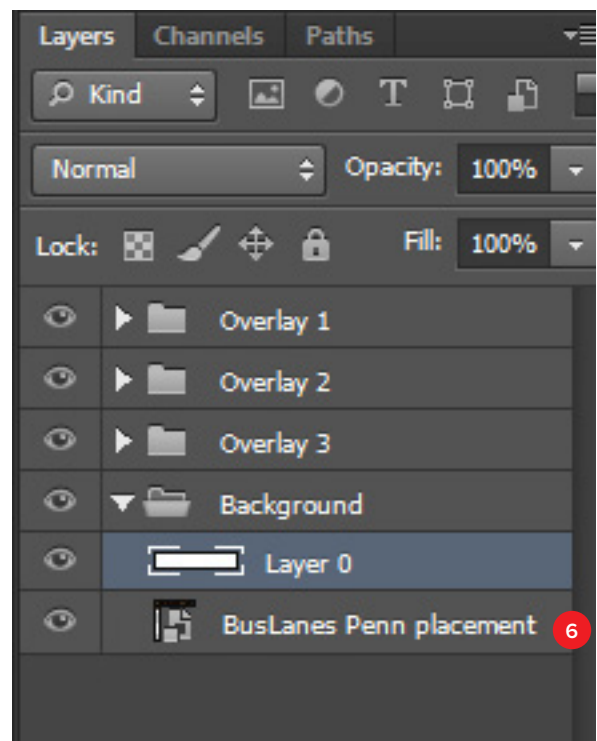


Fig: 11 - Drag layer panel to the bottom of the stack

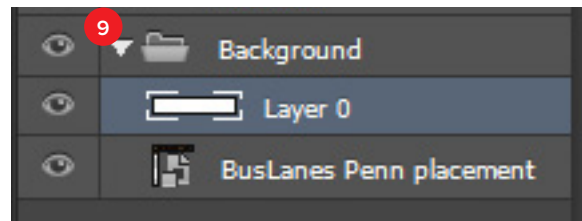


Fig: 13 - Select and Delete "Layer 0"

2.2 EXAMPLE OF OVERLAY

- Let's take a look at the example overlay file provided. Navigate to the Sample Project folder and double-click to open the "Bus Lanes Overlay.psd" file found in the Overlay folder.

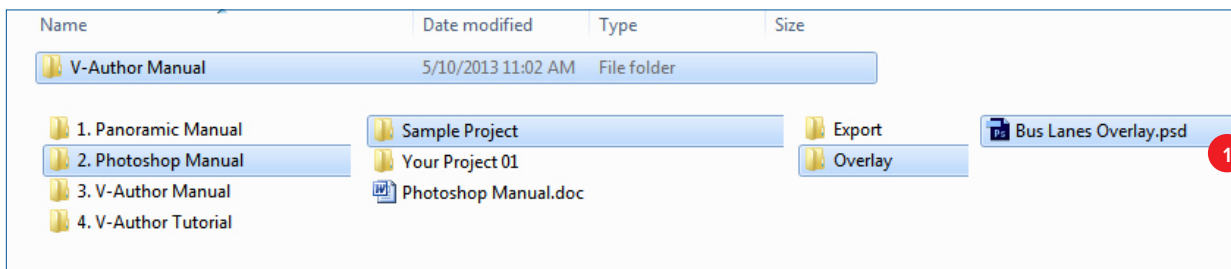


Fig: 14 - Example of an Overlay project

- Once loaded, you will see a bus terminal with 20 overlay folders and a background folder within the layers pallet.

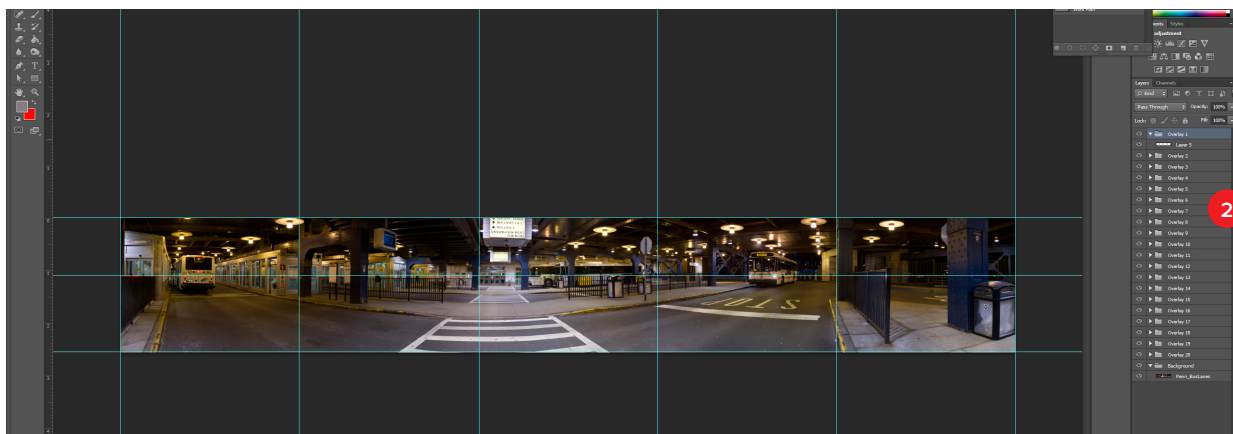


Fig: 15 - 20 Overlay folders on one panoramic image

- From here, you can see each individual cutout by turning on and off the background layer. To do this, click the “**EYE**” icon to the left of the layer.

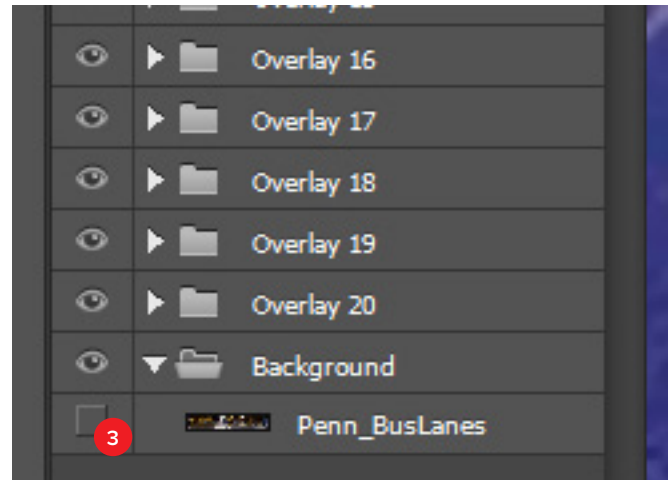


Fig: 16 - Click the “Eye” to view each layer

- Once you have turned off the background view, you will only see the overlay cut outs for this background.

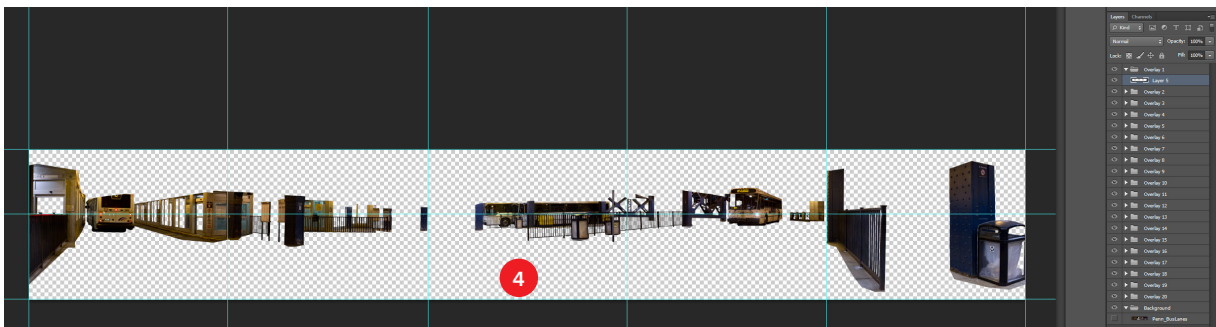


Fig: 17 - Preview of the overlay cutouts without the background image.

- The overlays need to be stacked as follows. The closest object to the screen needs to be placed in Overlay 1 and any object behind it needs to be placed in a folder under it. You are limited to a maximum of 20 overlays.

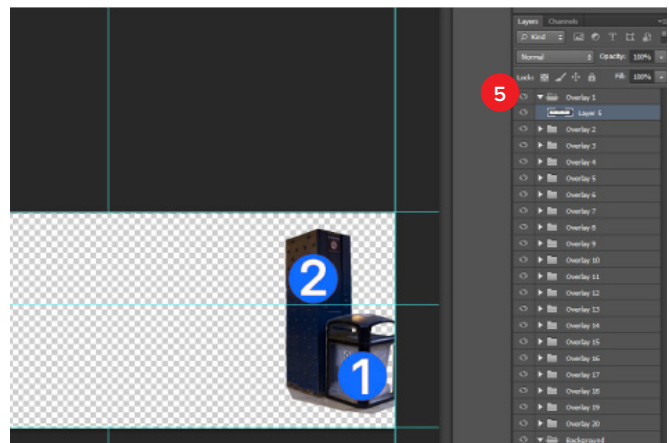


Fig: 18 - Order of overlays.

III. USING THE PEN TOOL

3.1 USING THE PEN TOOL TO CUT OUT OBJECTS

1. Navigate back to your Overlay Photoshop file and locate the first object you want to cut out.

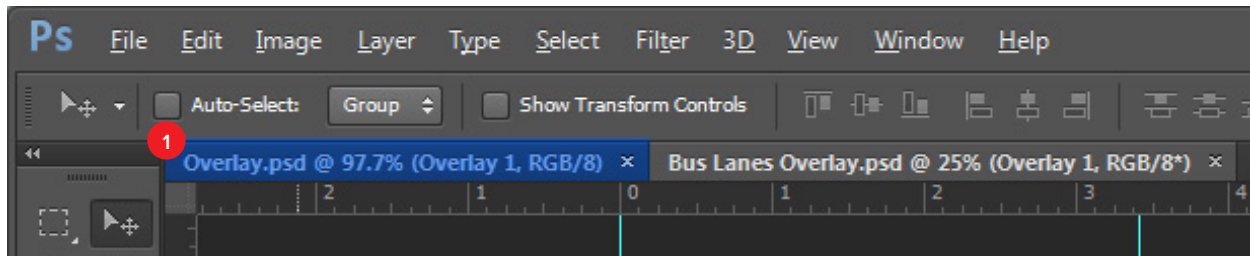
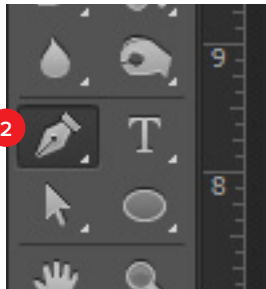


Fig: 19 - Back to Overlay.psd



2. Make sure your panoramic layer in the **“Background”** folder is selected. Next, select the **PEN** tool from the Toolbar or pressing **“P”** on the keyboard.

Fig: 20 - Select the PEN tool to start defining your cutouts

3. Once you have the pen tool selected, click at a place around the edge of your object. This will create a point at that place. Then, click and make another point around your object. You will notice the points will connect, making an outline around the object.
4. Your last click will be the same place as your first. You will notice a circle icon when you place your cursor over the starting point for this path. If you make a mistake, press **CTRL + Z** on the keyboard to undo the last move made. If you need to go back beyond 1 undo, hold down **CTRL + Alt + Z**. This will undo the last 20 moves.

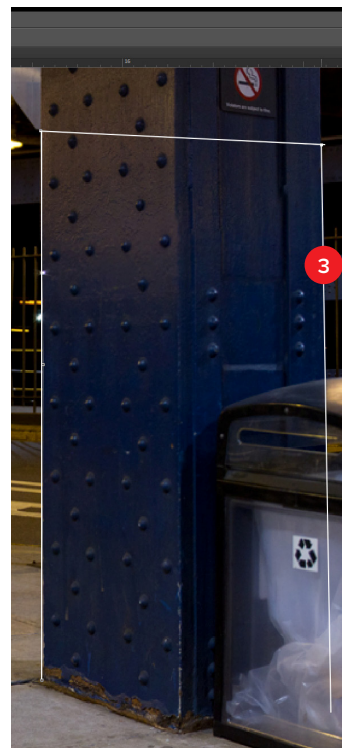


Fig: 21 - Drawing a perimeter around an object.

5. Once your path is complete, locate the tab next to the Layers tab called **“Paths.”**
6. Once selected, mouse over the icon on Fig 22. and an explanatory tool description will read: **“Load Path as a Selection.”** Click the icon and dancing points around the object will appear.

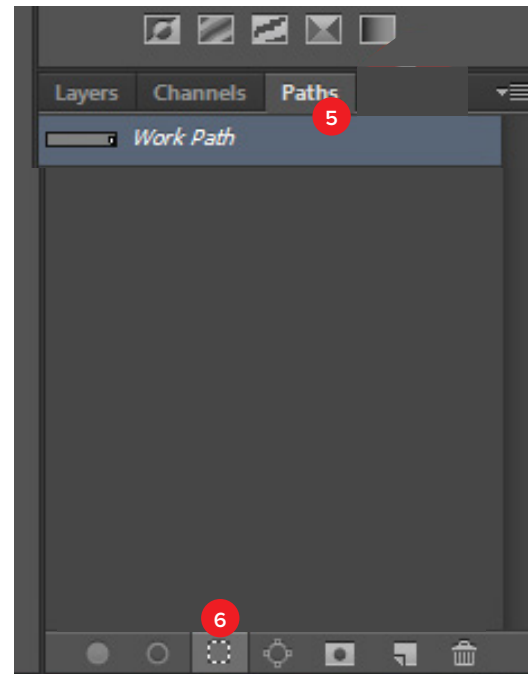


Fig: 22 - Turning your PEN outline into a selection.



Fig: 23 - Dancing points indicate the perimeter of the object you traced.

7. Once your selection looks like Fig 23 on the left, press **CTRL + C** then **SHIFT + CTRL + V**. Otherwise **Edit --> Copy--> Edit--> Paste** from the Menu bar at top. Make sure your panoramic layer in the Background folder is selected.

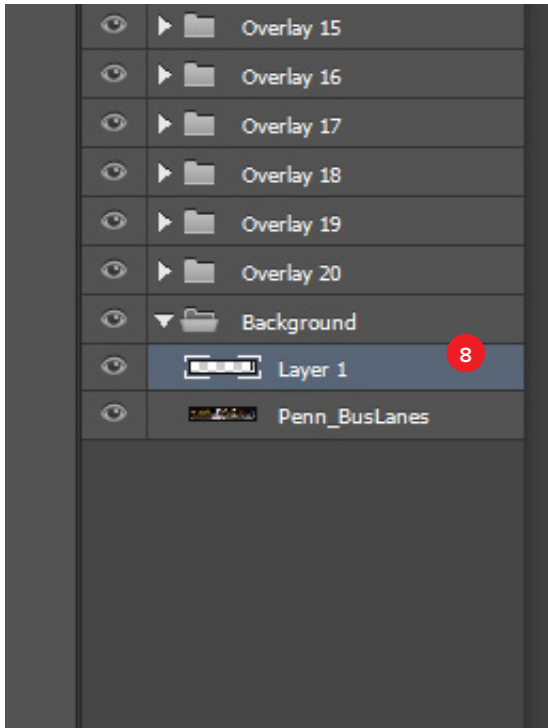


Fig: 24 - New Layer created.

8. Navigate back to the Layers tab and notice a new layer was created from your selection as indicated by “**Layer 1**” on Fig. 24. Next, move and insert this layer up to the Overlay 1 folder. Repeat steps 2-7 above placing the next cut out in the Overlay 2 folder, then 3 and so on...

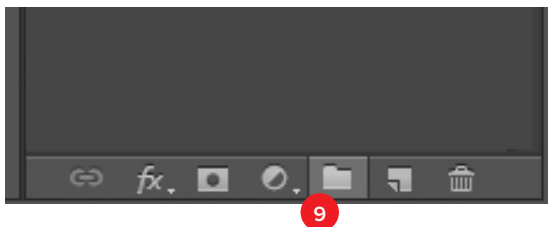


Fig: 25 - Create new Folder

9. If you have used all 3 overlays in the Overlay folders provided, you can create addition folders by clicking the Folder icon on the bottom of the Layers panel (Fig. 25).

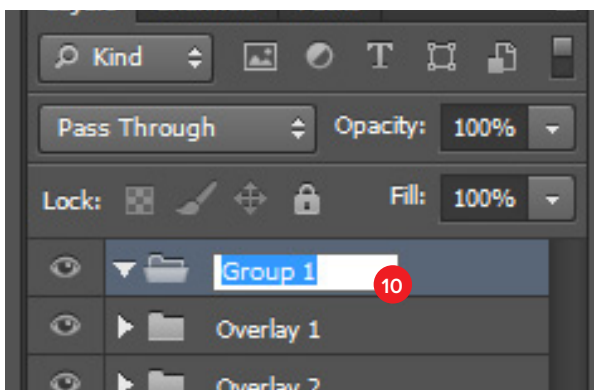


Fig: 26 - Renaming the Folder.

10. Double click on the folder layer Name to rename it Overlay 4, then hit **ENTER**.
11. Next, make sure the Overlay 4 folder is placed underneath the Overlay 3 folder indicating that objects in Overlay 4 is behind objects inside Overlay 3. See Fig.27 on the next page.

3.2 MOVING LAYERS AROUND THE LAYERS PALLET

Moving layers in the stack will give you a solid line indicating the placement is above or below. Moving layers inside a folder will give you a solid box around the folder indicating the placement is going inside the folder.

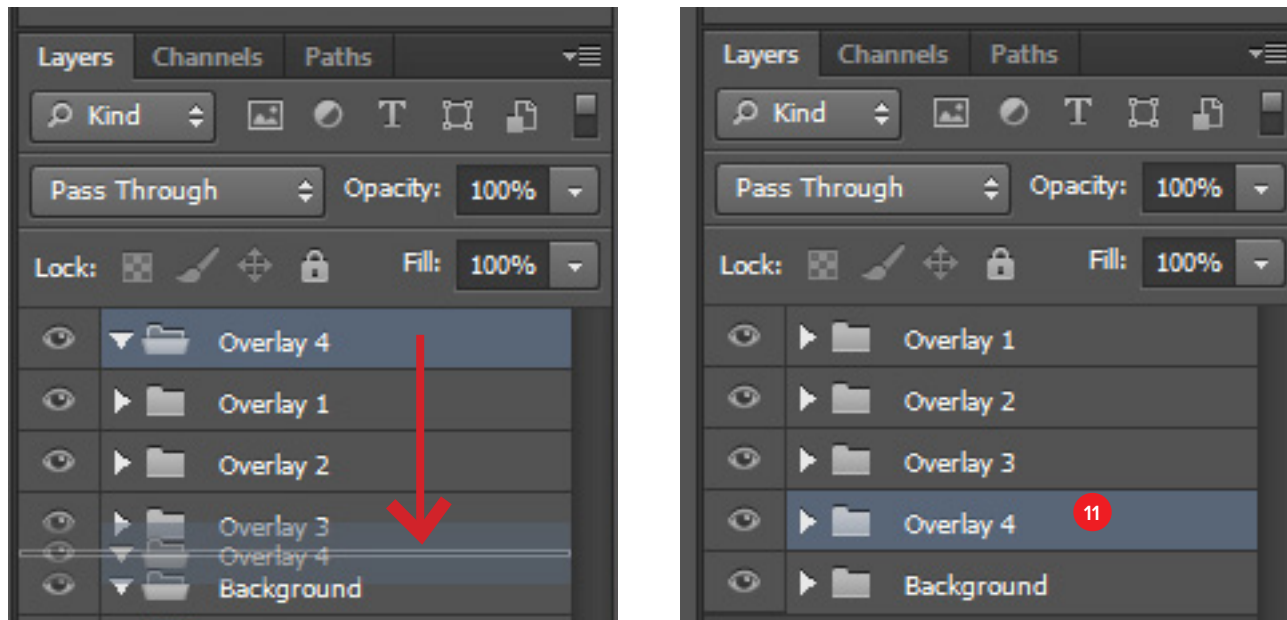


Fig: 27 - Moving layers in the stack.

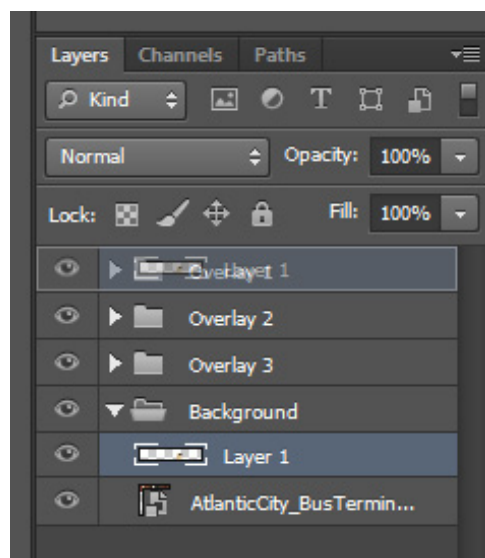


Fig: 28 - Moving layers within a folder.

IV. EXPORTING THE BACKGROUND

Once you have made all the overlays for your particular background, you will want to export this information to use in the V-Author software.

1. You can do so by selection *File, Scripts, Export Background* from the Menu bar at top.

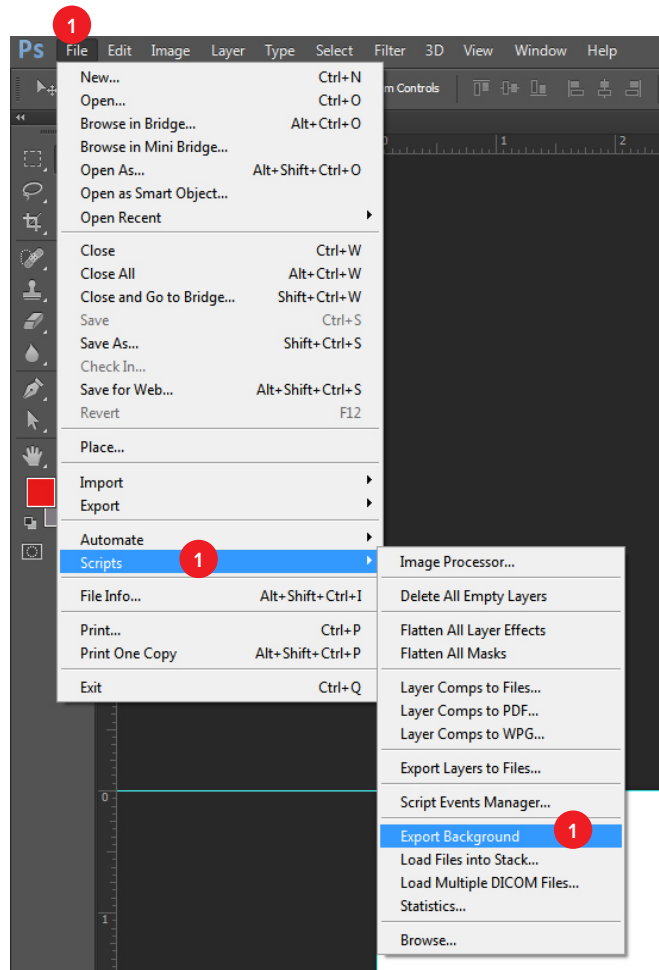


Fig: 29 - Exporting the overlays in Photoshop.

2. A dialogue box will then appear. Here you will choose a folder to export to. Choose the “**Export**” folder created inside Your Project 01 folder. Once you click **OK**, the overlay information will then be processed over and placed within that folder.

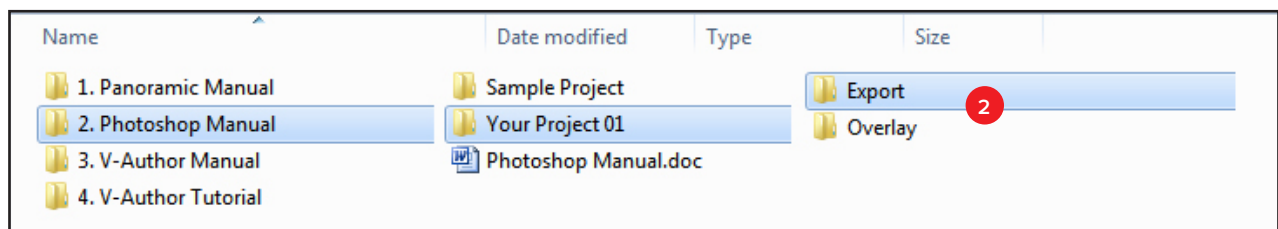


Fig: 30 - Select the “Export” folder.

V. IMPORTING THE BACKGROUND

5.1 SCENE IMPORT TOOL

1. The last step is to import the information we just exported. First, locate the “Scene Import tool” located either on the desktop or task bar of your computer.

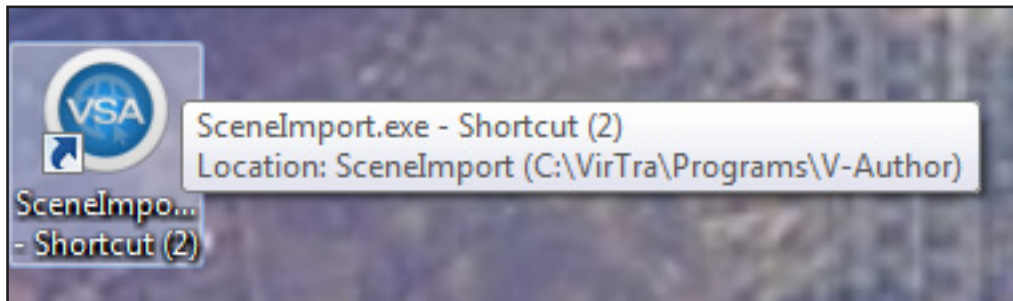


Fig: 31 - Scene Import Tool icon

2. Double click this icon to open the tool. Once open, select the icon to the top right and locate the Background.xml file from the Photoshop export.
3. Click **OK** at the bottom and the tool will begin to import your background. Once the tool says “Completed scene import,” you can select “Cancel” to close the import tool.

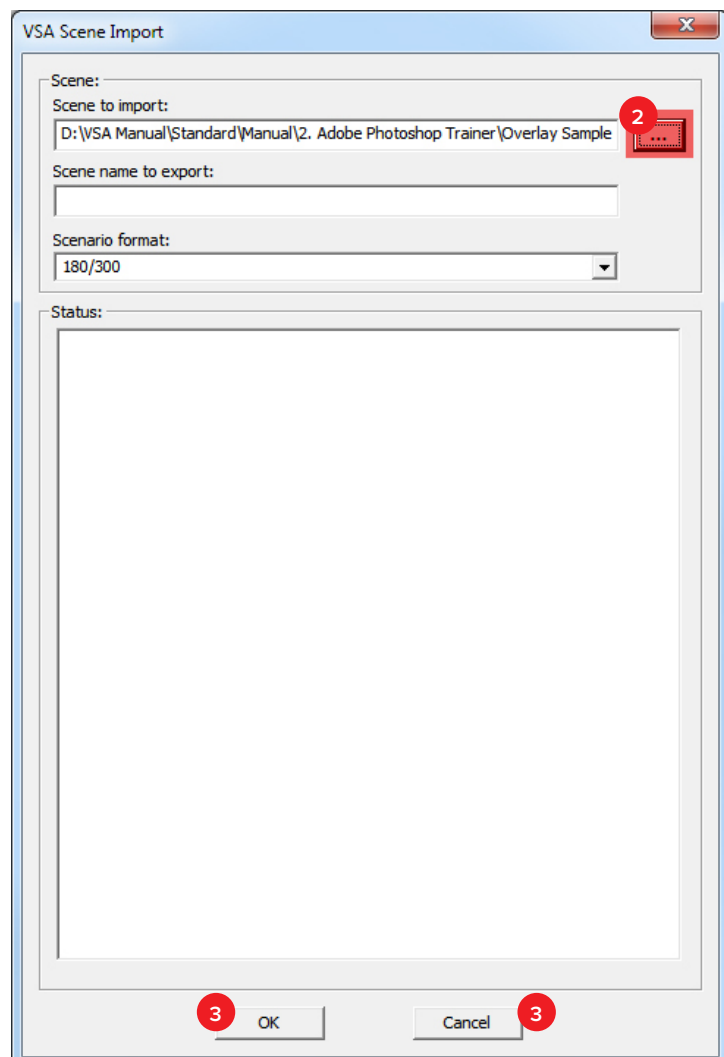


Fig: 32 - Import dialogue box.

5.2 CREATE A THUMBNAIL ICON

1. The final step in this process is to create a thumbnail icon for selecting the background for use in your authoring tool. Navigate over to your D drive on the computer and follow this file directory path.

D:\VirTra\Content\VSA\BackgroundLibrary

2. Locate the background you created in this folder and double click the Icon.png file within it.

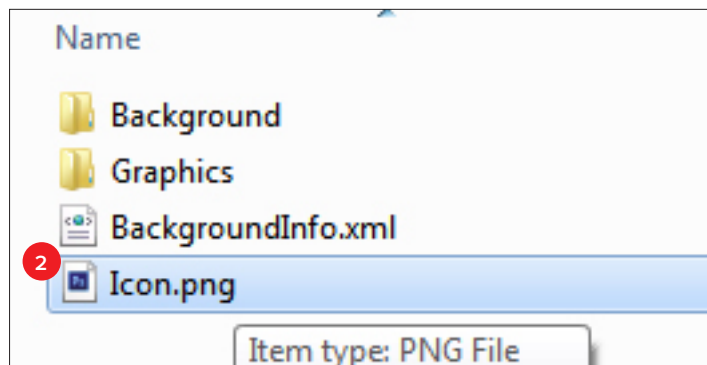


Fig: 33 - Create a thumbnail icon for the background

3. This will open this file in Photoshop. Once open in Photoshop, you will want to select **FILE, PLACE** from the top Menu bar and navigate to your panoramic background and select **PASTE**. You will want to rescale this to fit the dimensions of the document.
4. Once completed select **FILE, SAVE AS** from the top Menu bar. You will want to choose PNG as the format and select copy and replace. This will replace the current icon with the one just created.
5. You can open your authoring tool and now scroll through to locate final imported panoramic background

VI. CONTACT VIRTRA

If you have any questions regarding this manual, please see contact below:

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