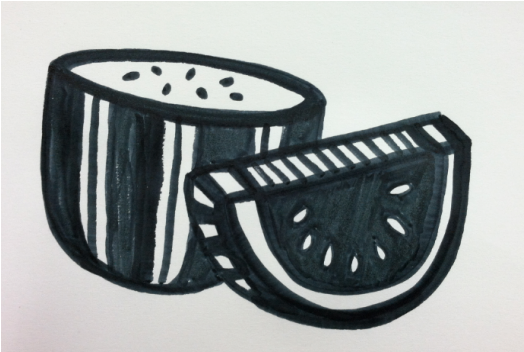


Preparing Files for CNC Woodblock Prints

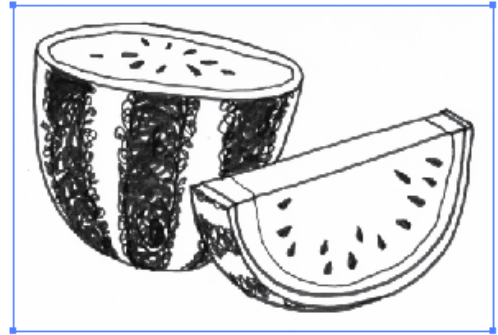
✕ MCAD 3D Shop

When creating a digital file for a CNC woodblock print, we ask that you use Adobe Illustrator software. You'll want to make your sure your image consists of big, bold shapes. Avoid fine lines and small details.

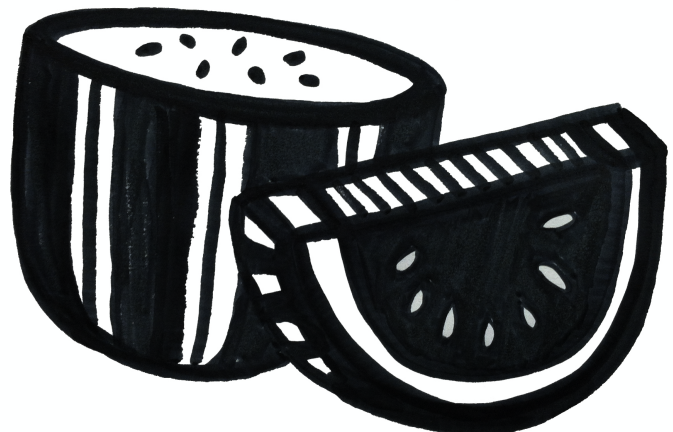
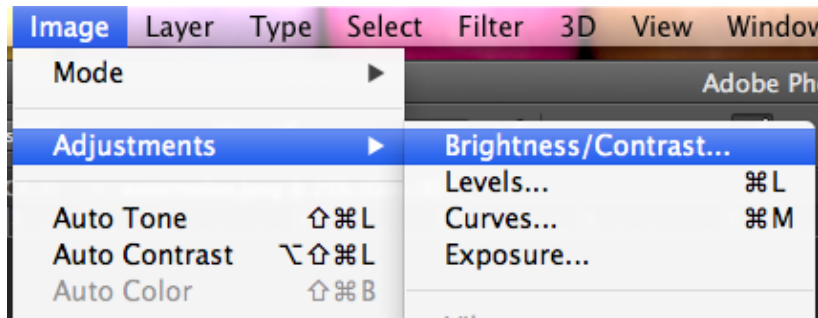
Good:



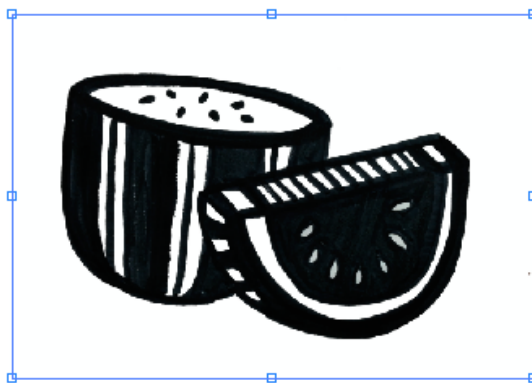
Bad:



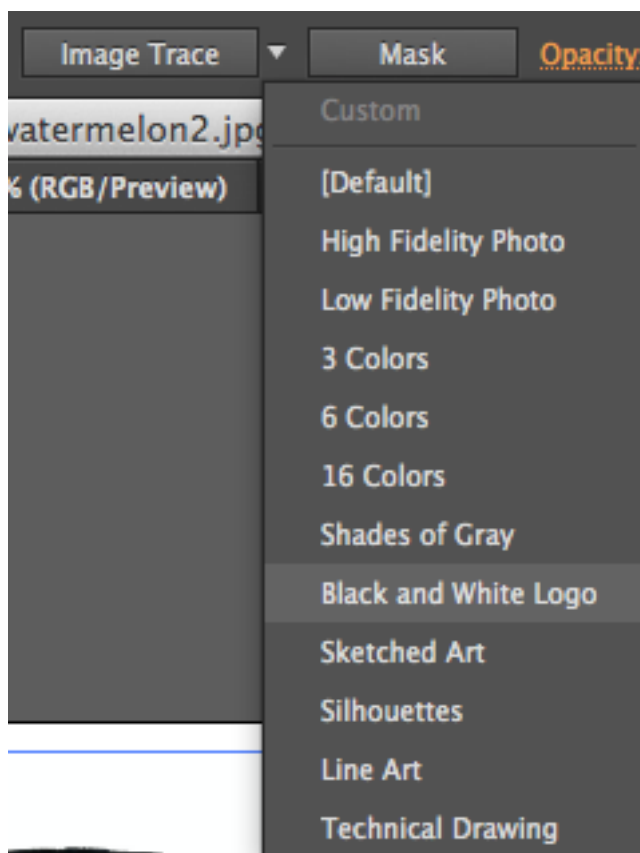
There are a few main processes you can use to create paths. Let's start with **Live Trace**. Live Trace allows you to turn any hand-drawn image into vector lines with a few easy steps. You'll want to start with a clean, black line drawing on white paper. I recommend drawing with a rich black marker (Sharpie, Prismacolor, Chart-pak, etc.) Avoid sketchy lines, lots of eraser marks and other light lines (pencil, ballpoint pen, etc.) Once you are happy with your image, scan it to a high resolution file (like a .tiff or .jpg). If the image scans in too dark/light or there are unwanted marks that show up, bring it into Photoshop and use brightness/contrast adjustments along with you eraser or magic wand tool to clean it up.



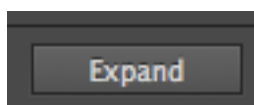
Once you are happy with your scanned image, save it and open the file up in Illustrator. Click your image area once to select it (a blue bounding box should appear around your image area).



Once the image is selected, an **Image Trace** button should appear in your control panel. Just to the right of the Live Trace button you will see a small arrow. Click on the arrow to reveal a Live Trace dropdown menu.



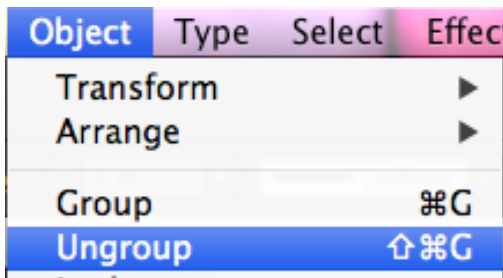
Here you can choose from a number of default settings. Depending on the level of detail in your drawing, you can try out different options, but typically **Black and White Logo** is a good choice. Once you select your Image Trace option, the file will be converted into vector paths and an **Expand** button will appear in your control panel.



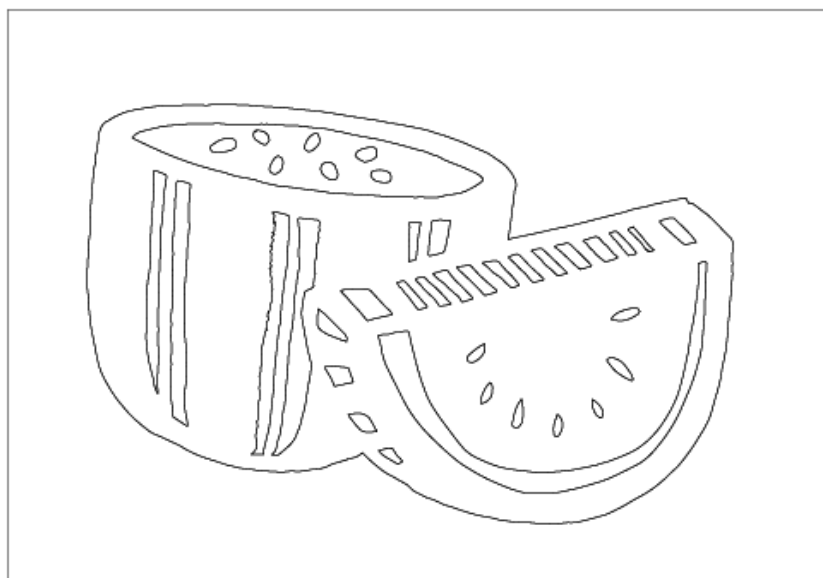
When you hit **Expand**, your image will turn into a series of points, lines and curves:



Once your image is expanded, you'll want to **ungroup** it. Select all, then go to **Object > Ungroup**. Then, select your ungrouped image and change the **stroke** to black and the **fill** to "none". This can be done at the bottom of the toolbar or on the far left of the control panel.

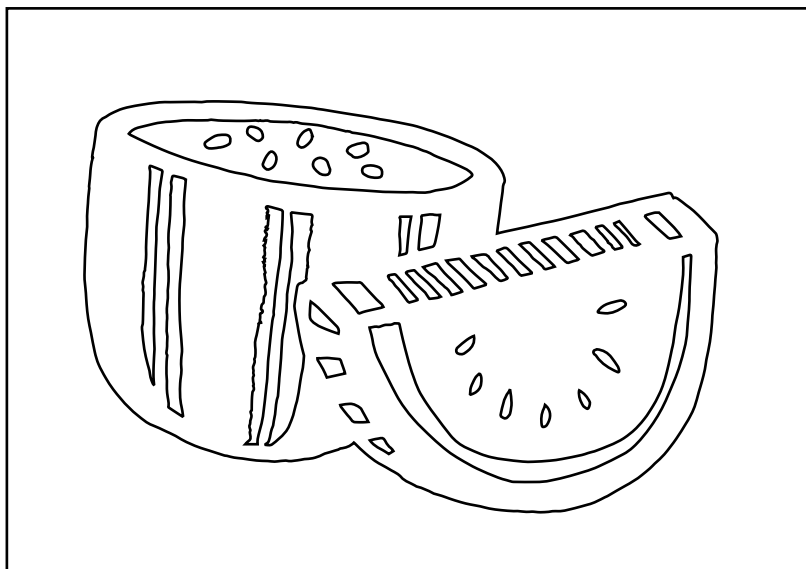


Your image should now look something like this:



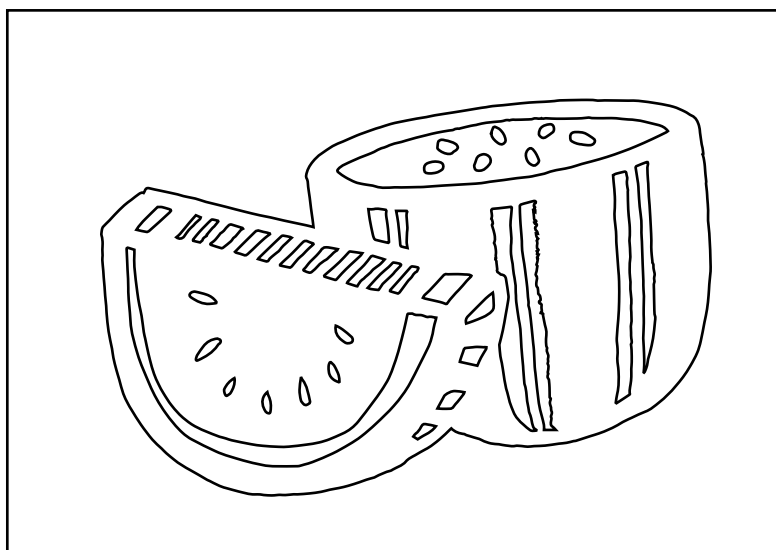
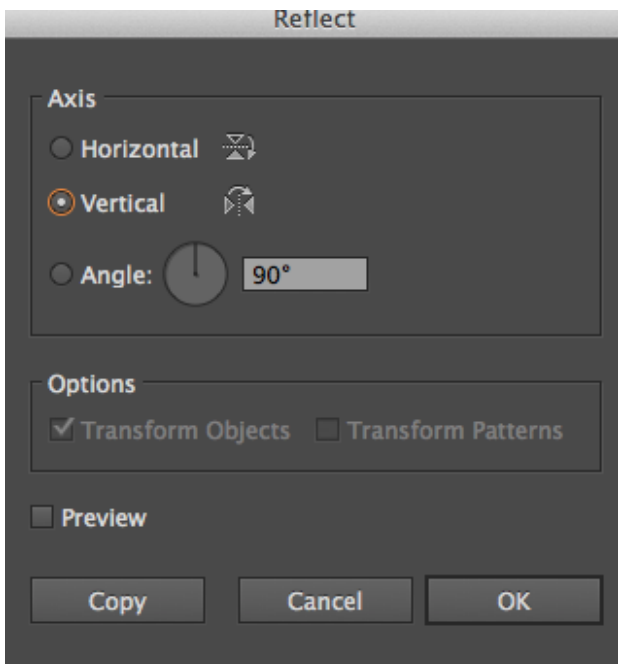
Now you can go into the image and make edits to individual paths. Often times, the Live Trace function will leave multiples of the same path overlapping each other. Typically when this happens, the lines will appear darker or bolder. You **MUST** delete any multiple paths so your final image is a single path of each part of the image.

Also, keep in mind that if your wood is going to be cut using a 1/4" router bit, the bit will not fit into any space smaller than 1/4". You will be better off hand-carving the smaller details out of your woodblock after the piece is done on the router. So at this step, you'll want to get rid of any small details and make your image as clean and simple as possible.

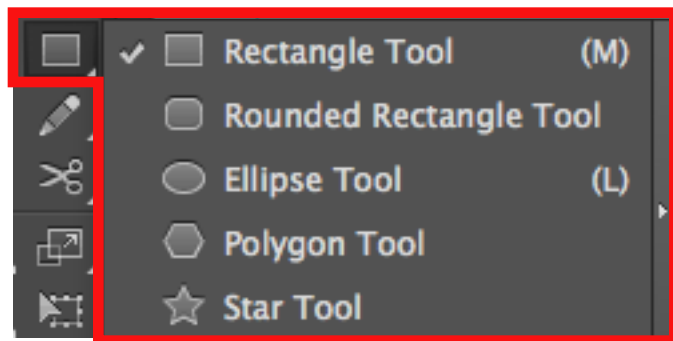


Lastly, don't forget to **reflect** your image so when you print it, it comes out facing the right direction!

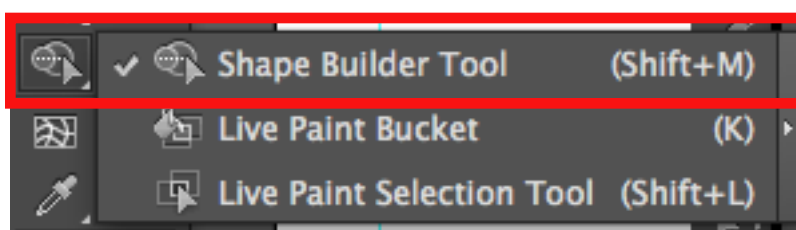
Object > Transform > Reflect > Vertical



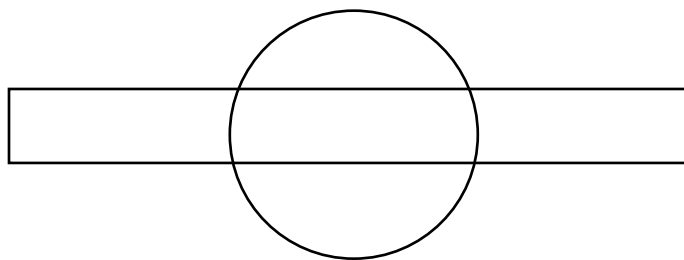
The second way to create a vector image is to use the **shape tools** in Illustrator. Shapes include the **rectangle**, **rounded rectangle**, **ellipse**, **polygon** and **star** and can be found on the toolbar.



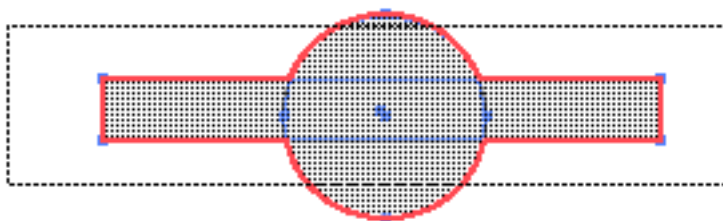
You can combine a number of different paths into one large shape using the **shapebuilder tool**.



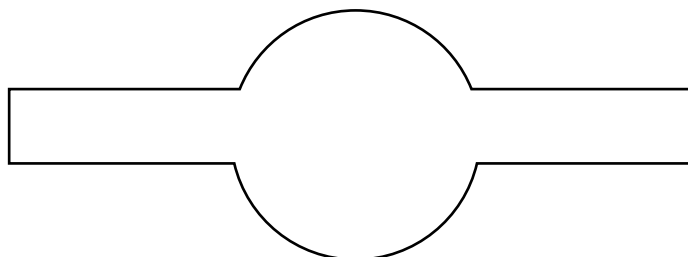
Let's say I wanted to make this circle and rectangle into one path.



First, select both shapes. Then, using the shapebuilder tool, simply hold down the shift key and drag over the entire shape, so that it looks like this:



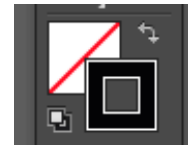
Then release and voila!



You can also use the **Pen Tool** to draw more complex and custom shapes.



Again, make sure your stroke is set to black and fill to "none."



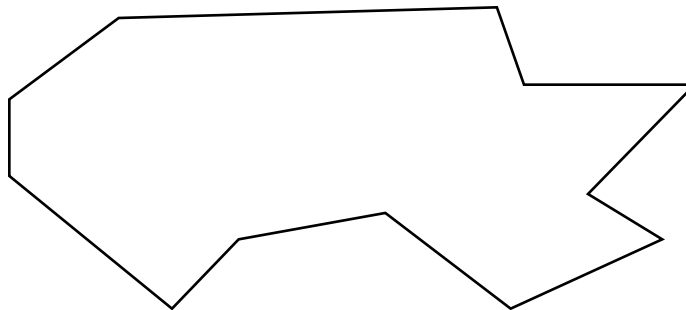
With the Pen Tool selected, click once and you'll get an **anchor point**.



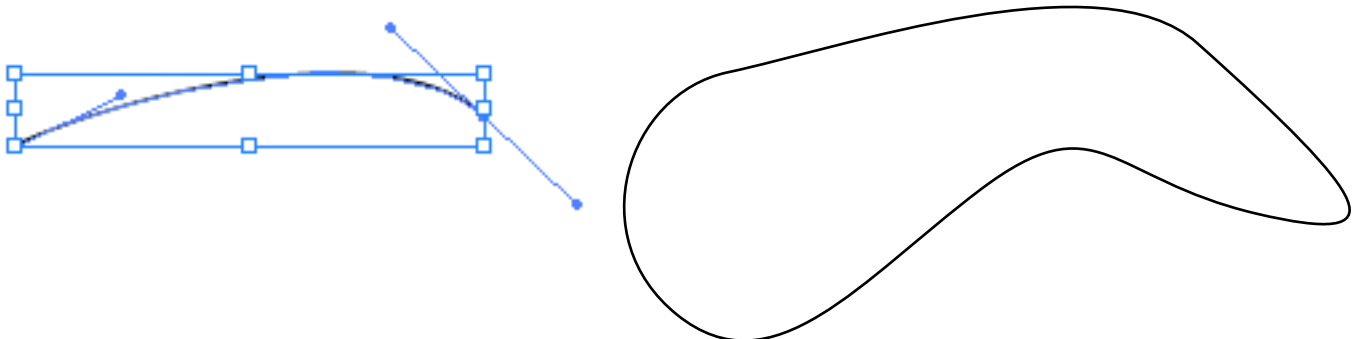
Click again in a different location and you'll get a line connecting between the first and second anchor points:



Continue to click and move around. If the last anchor point you click on is the same one you started with, you will create a closed polygon:



This time try clicking, holding down on the mouse, dragging out from your anchor point, then releasing as you create curves:

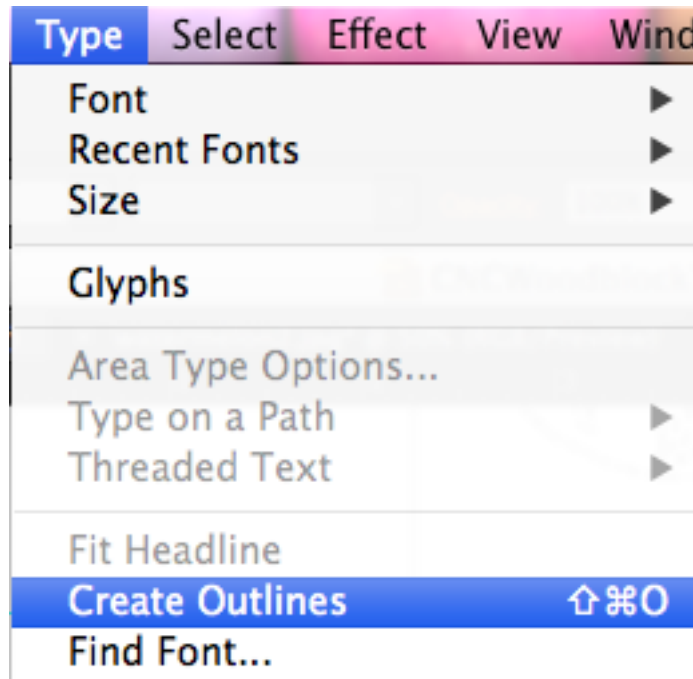


After you've completed a curve or a closed shape, you can go back in with your **Direct Selection Tool** to edit the placement of individual anchor points, or the severity of the curves.



The last thing we'll talk about is text. You can create words using any font of your choice, however to prepare them for the CNC Router, you MUST turn your text into paths. To do this, select your text and go to **Type > Create Outlines**.

Printmaking!



Your text should then look something like this:



Lastly, don't forget to mirror your text! **Object > Transform > Reflect > Vertical**

