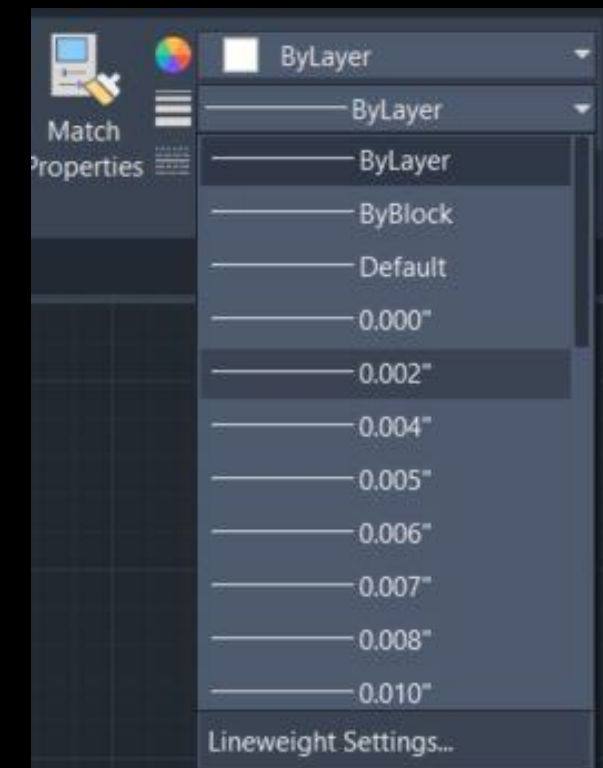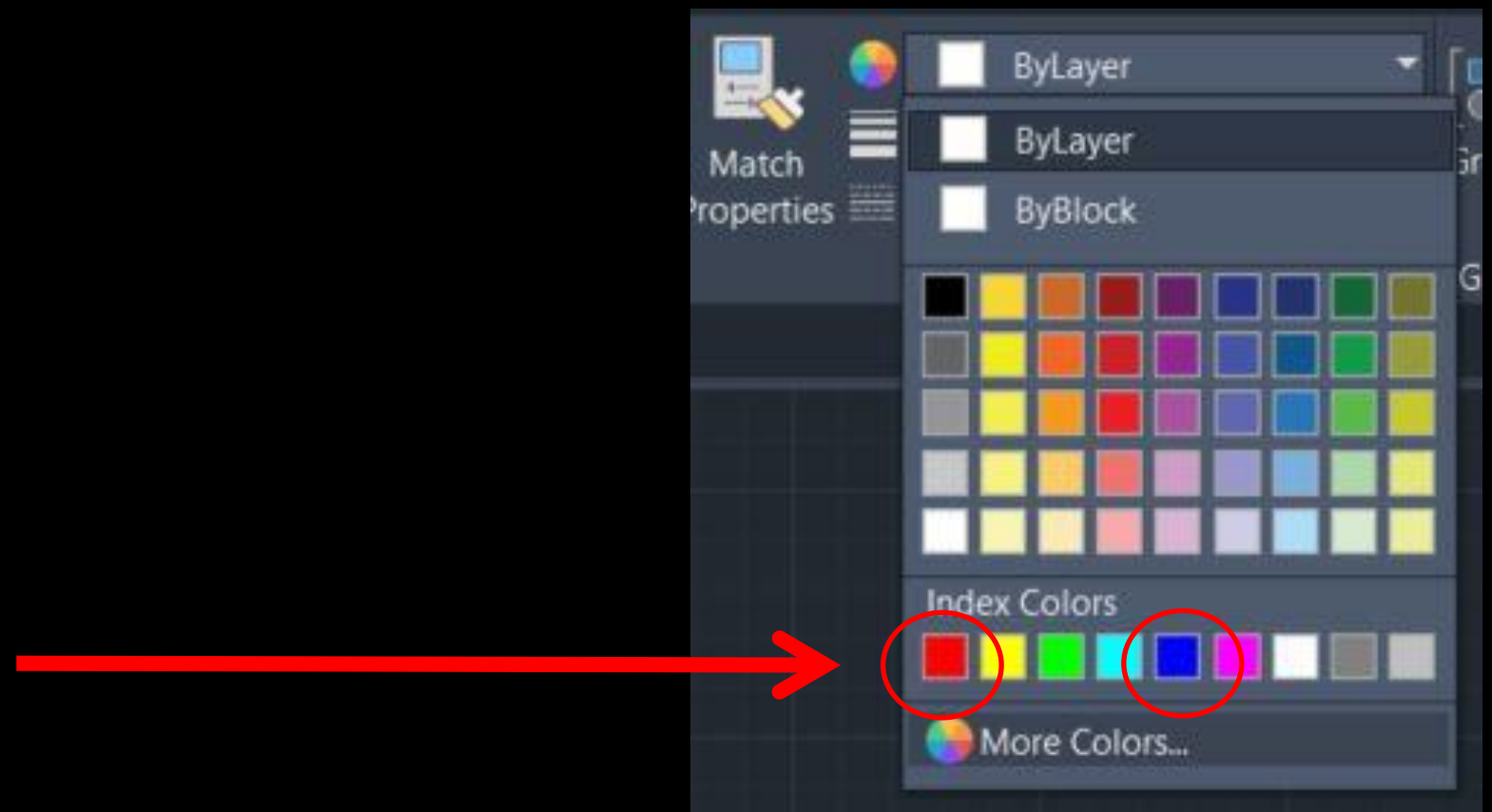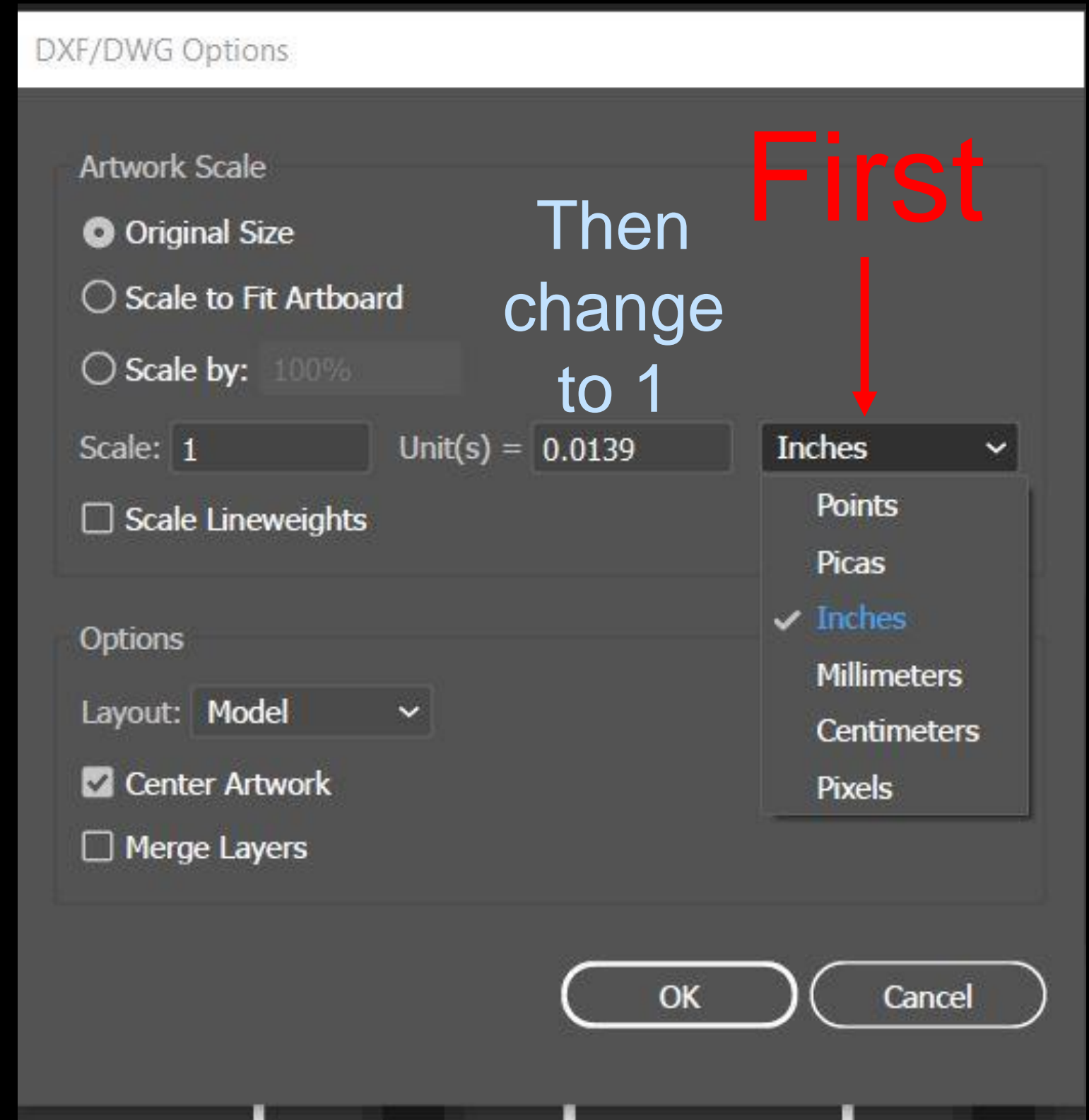# HOW TO AUTOCAD TO ILLUSTRATOR!

FRESH 18 JANUARY 2022

You will need to convert your AutoCAD file to an Illustrator file or PDF to interface with the lasers. The lasers are very picky about the settings.

In AutoCAD, use the Red and Darker blue in the index colors. Change your line width to either 0.000" or 0.002".

When you import into Illustrator, you'll have to choose settings in a specific order: Change your units to what you modeled in, THEN change the scale units to 1. Then click OK.

DXF/DWG Options

Artwork Scale

Then change to 1

First

○ Original Size

○ Scale to Fit Artboard

○ Scale by: 100%

Scale: 1   Unit(s) = 0.0139   Inches ⌄

☐ Scale Lineweights

Points
Picas
✓ Inches
Millimeters
Centimeters
Pixels

Options

Layout: Model ⌄

☑ Center Artwork

☐ Merge Layers

OK   Cancel

Once in illustrator, you may have to change the stroke width to 0.01pt for things to cut and vector engrave right.

Appearance

Fill

Stroke | .01 pt

Opacity | 100%
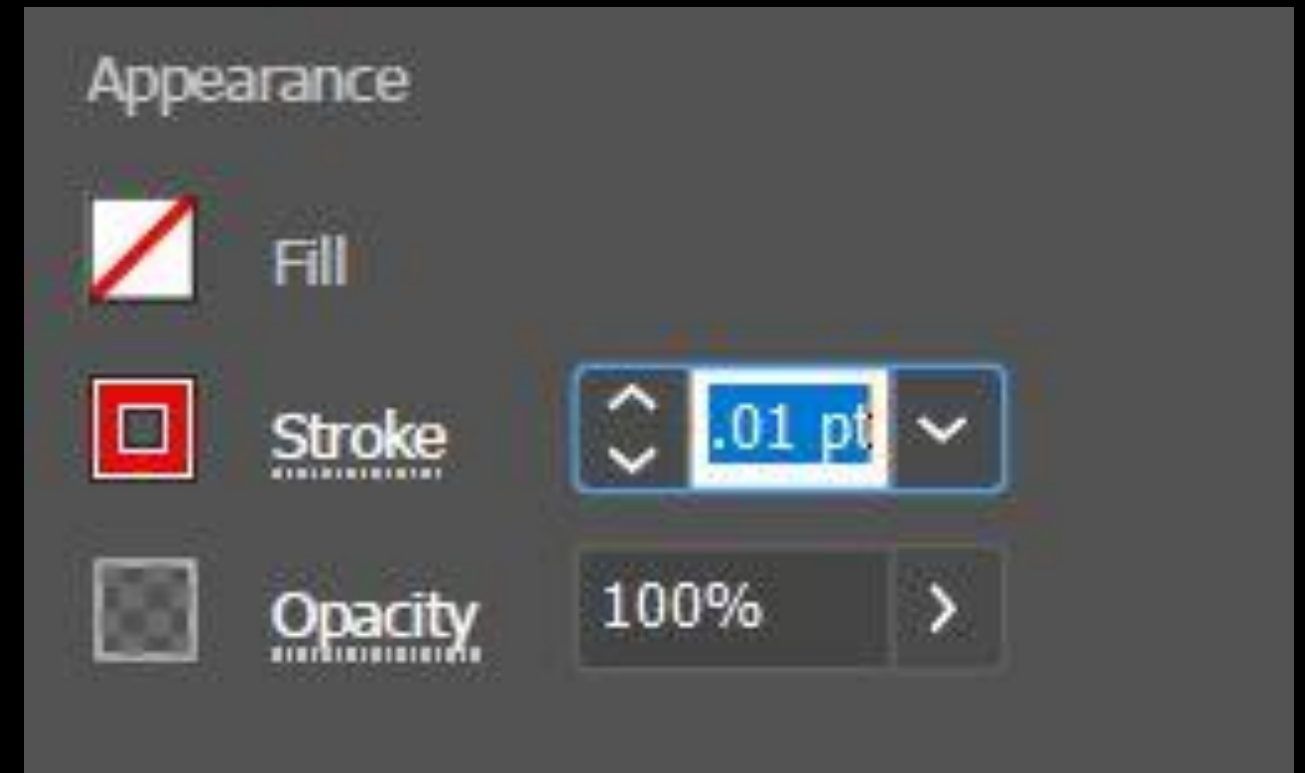
Now you can safe as an AI file or PDF. If you are having issues, you may need to use the template to make some changes….

For general use, it's easiest to print from Adobe Illustrator. We've created an Illustrator template file that's set up to work with the laser. You can copy and past your work from your file into the template.
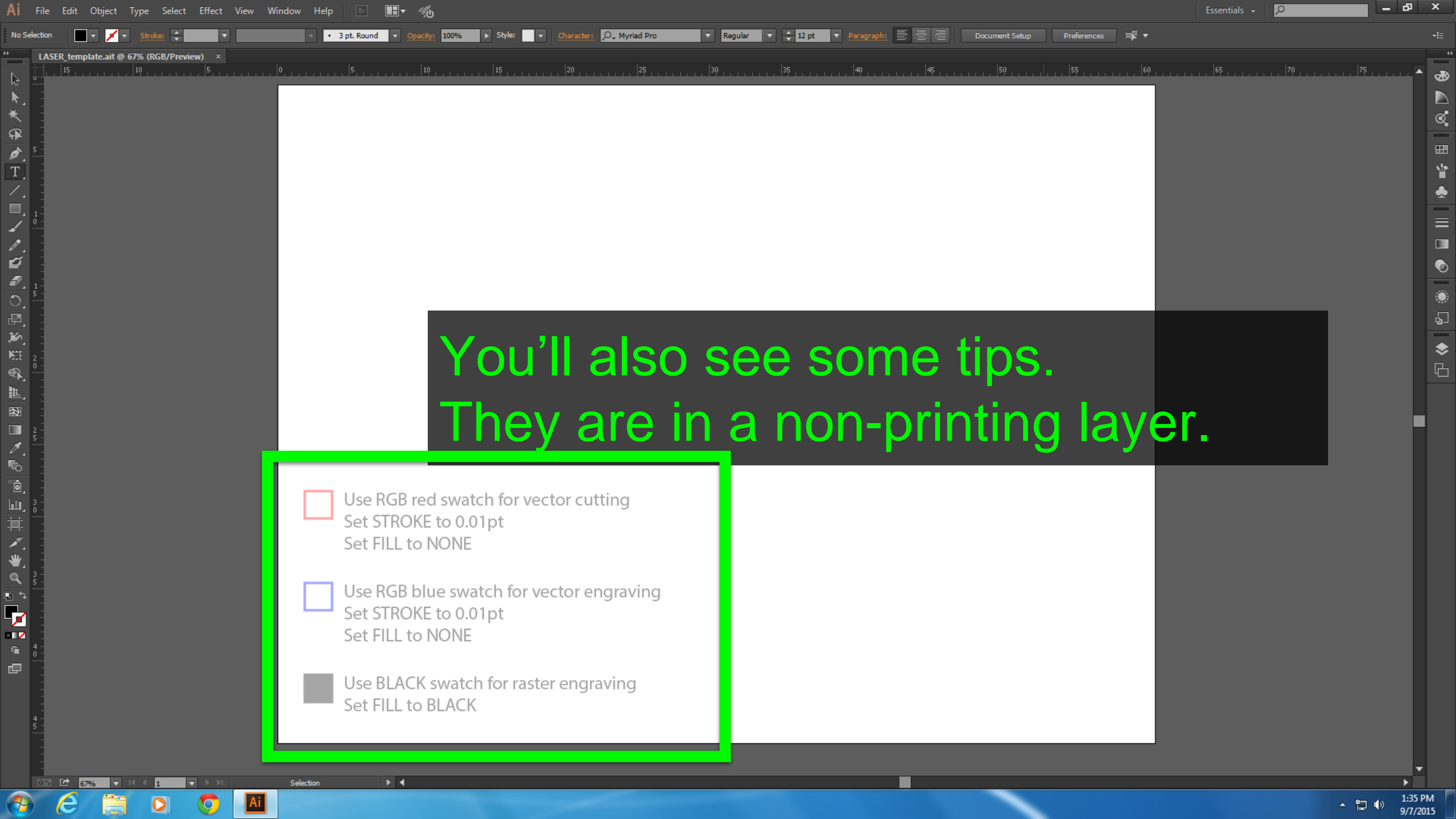Https://go.gwu.edu/csadlasertemplate
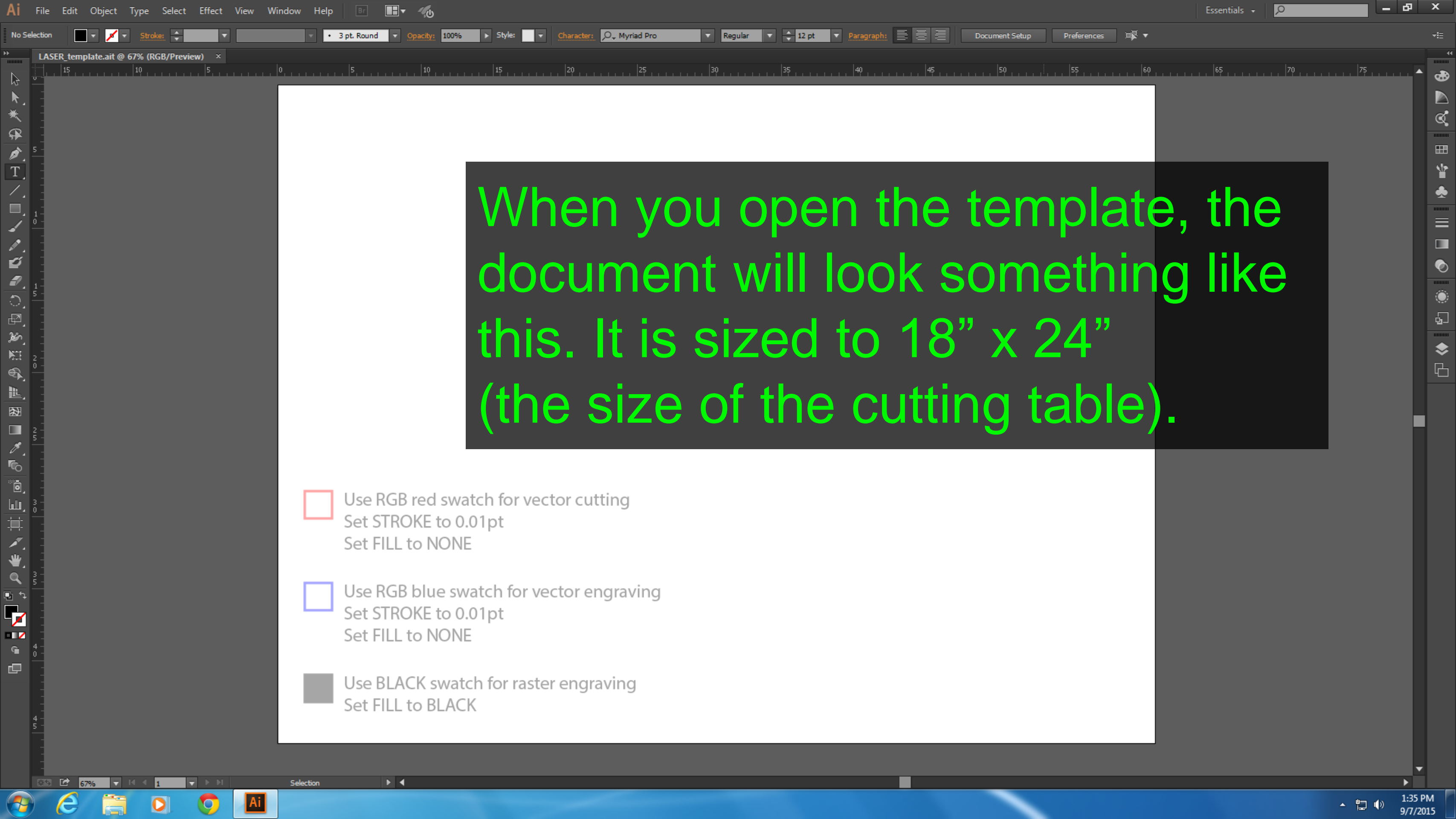
When you open the template, the document will look something like this. It is sized to 18" x 24" (the size of the cutting table).

Use RGB red swatch for vector cutting
Set STROKE to 0.01pt
Set FILL to NONE

Use RGB blue swatch for vector engraving
Set STROKE to 0.01pt
Set FILL to NONE

Use BLACK swatch for raster engraving
Set FILL to BLACK
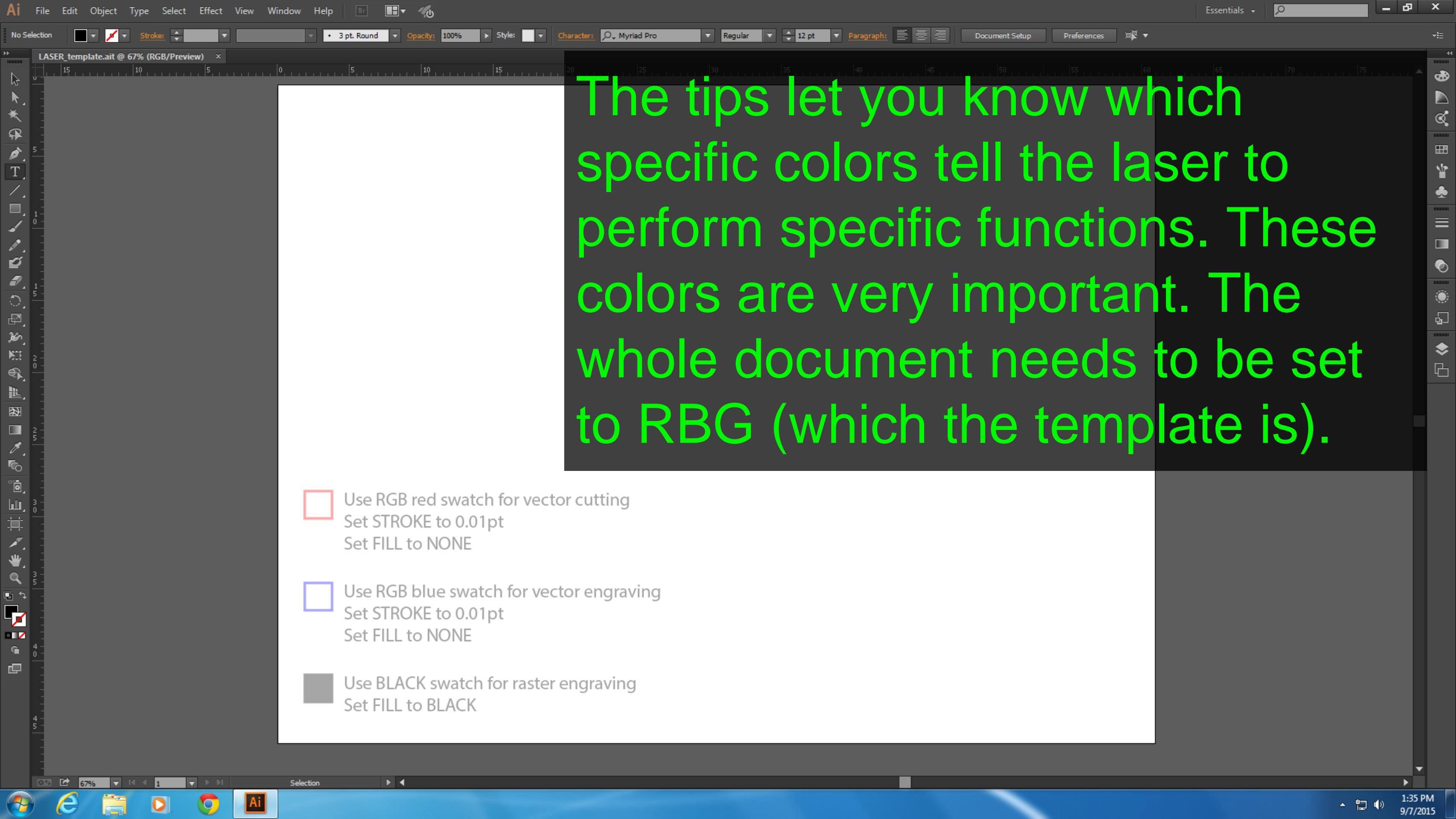
You'll also see some tips.
They are in a non-printing layer.

Use RGB red swatch for vector cutting
Set STROKE to 0.01pt
Set FILL to NONE

Use RGB blue swatch for vector engraving
Set STROKE to 0.01pt
Set FILL to NONE

Use BLACK swatch for raster engraving
Set FILL to BLACK

The tips let you know which specific colors tell the laser to perform specific functions. These colors are very important. The whole document needs to be set to RBG (which the template is).

Use RGB red swatch for vector cutting
Set STROKE to 0.01pt
Set FILL to NONE

Use RGB blue swatch for vector engraving
Set STROKE to 0.01pt
Set FILL to NONE

Use BLACK swatch for raster engraving
Set FILL to BLACK
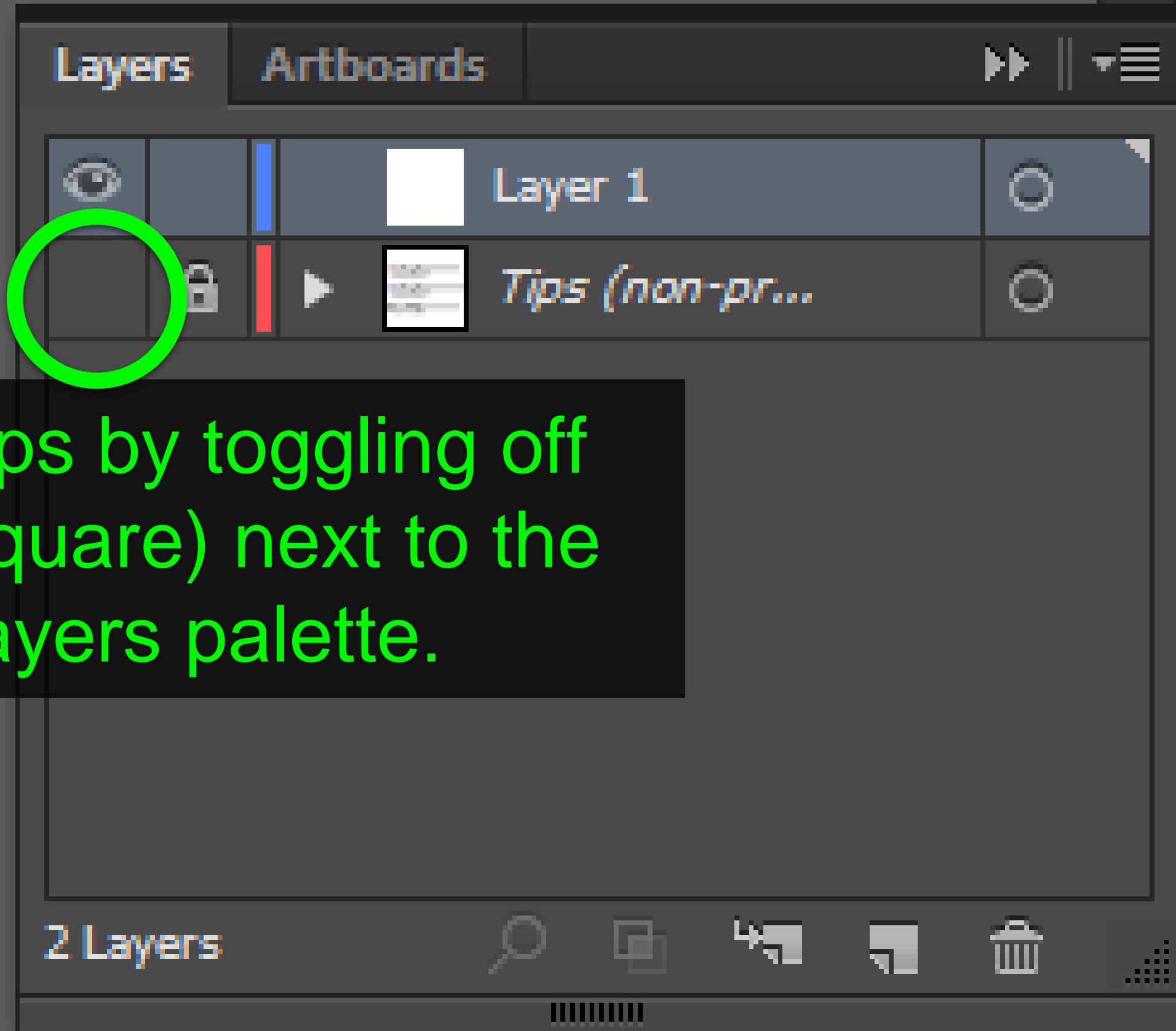
You can hide the tips by toggling off the 'view' icon (a square) next to the 'Tips' layer in the layers palette.

The laser can do
three basic things:

vector cut
vector engrave
raster engrave

If you want to cut clean through a material, you use vector art to specify a path that the laser will follow. Vector art is typically created in programs like Adobe Illustrator.

If you want a clean hairline that is **engraved on the material, but not cutting all the way through**, you will vector engrave. Again, you are specifying a path that the laser will follow using vector art.

If you want to mark a material with anything other than a hairline without cutting through, you will raster engrave. Any vector art that has a fill, a stroke greater than 0.01pt, or raster art (anything with pixels) will raster engrave.)