Laser cut map workshop

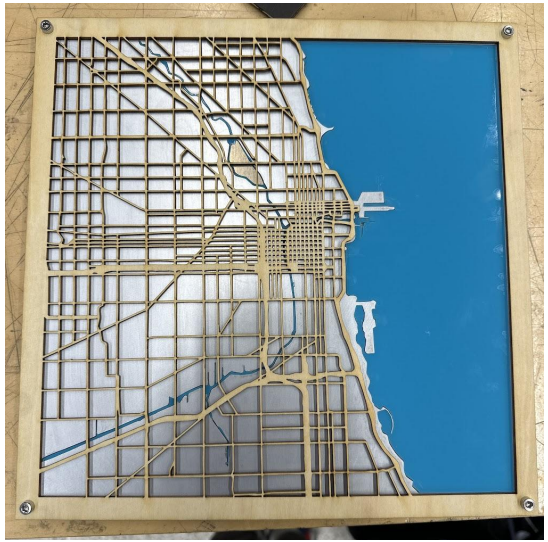
with Colin

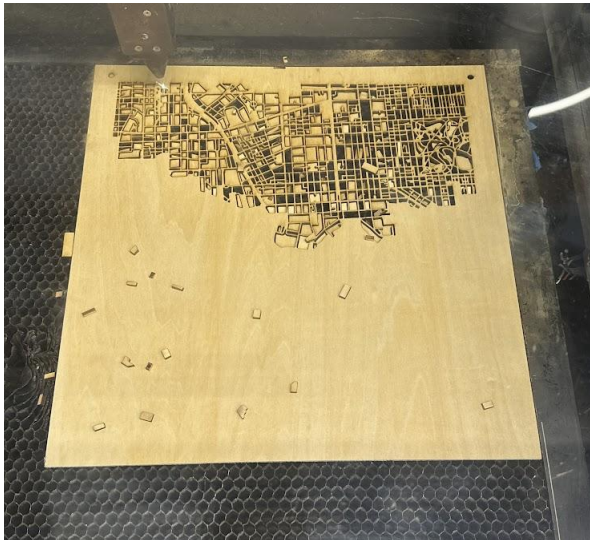
THE HIVE MAKERSPACE

What we’re making

Custom layered laser-cut maps!

- top layer: wood (roads)
- middle layer: acrylic (water) + wood or aluminum





What we’re using

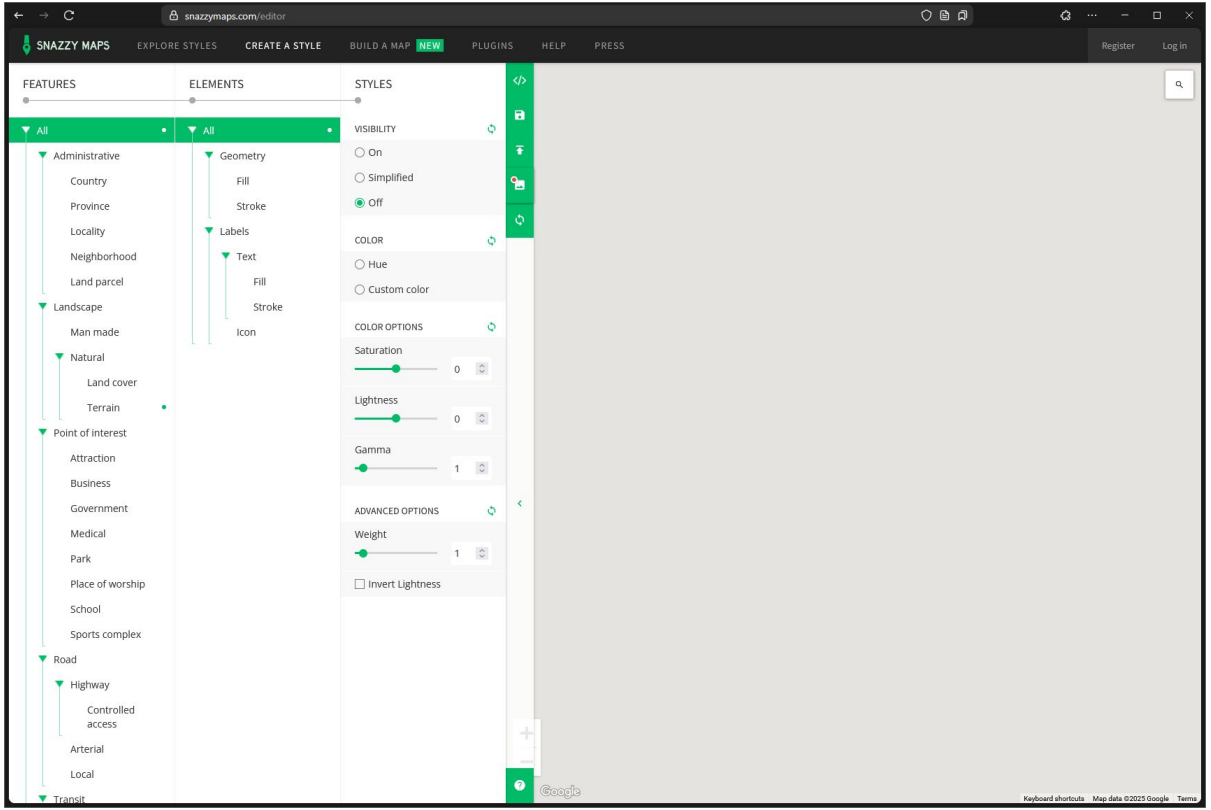
- SnazzyMaps
- Adobe Illustrator
- FabCreator
- some cheeky image processing tricks

Step 1: Creating a map and generating images

- Go to snazzymaps.com, create an account, and click “create a style”
- Start from default
- Search for a place to use as the centerpoint of your map (using the Eiffel Tower in this example)
    - **REMEMBER THIS PLACE!**

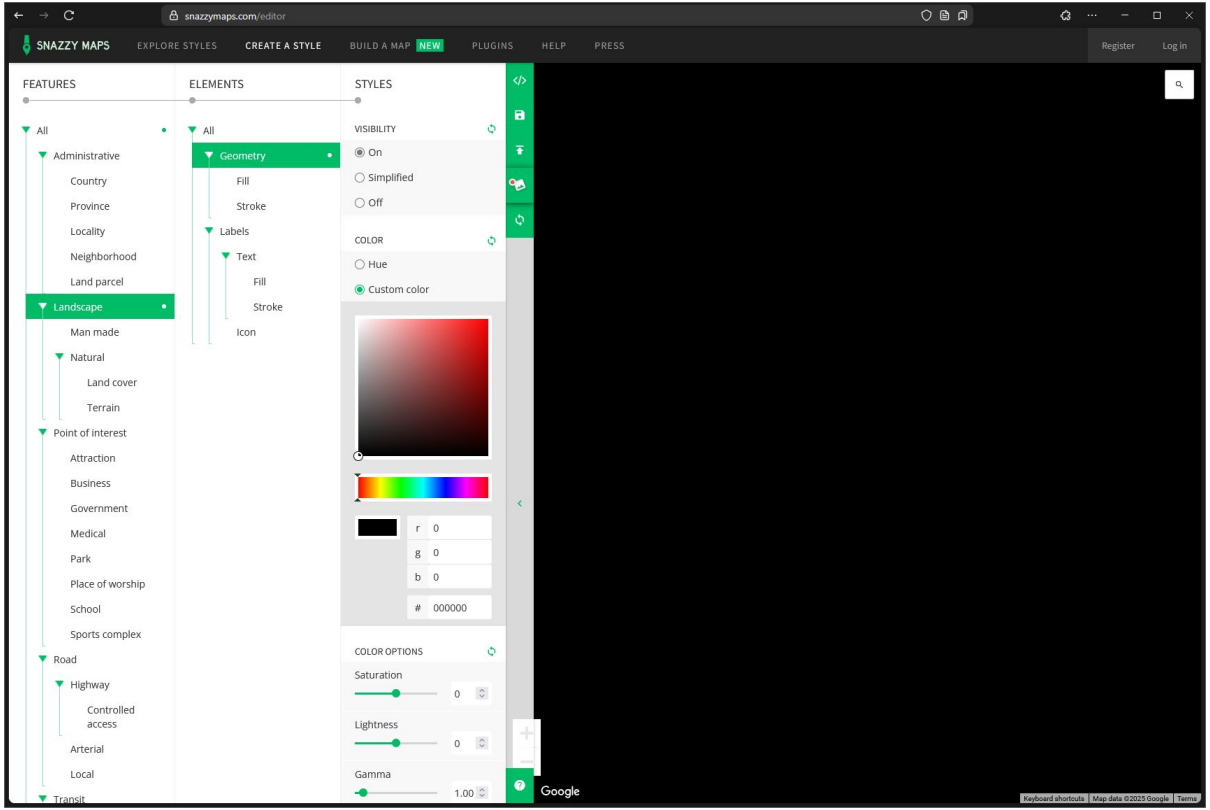
Turn All OFF and set color

- gives us a nice starting point to only add the features we want



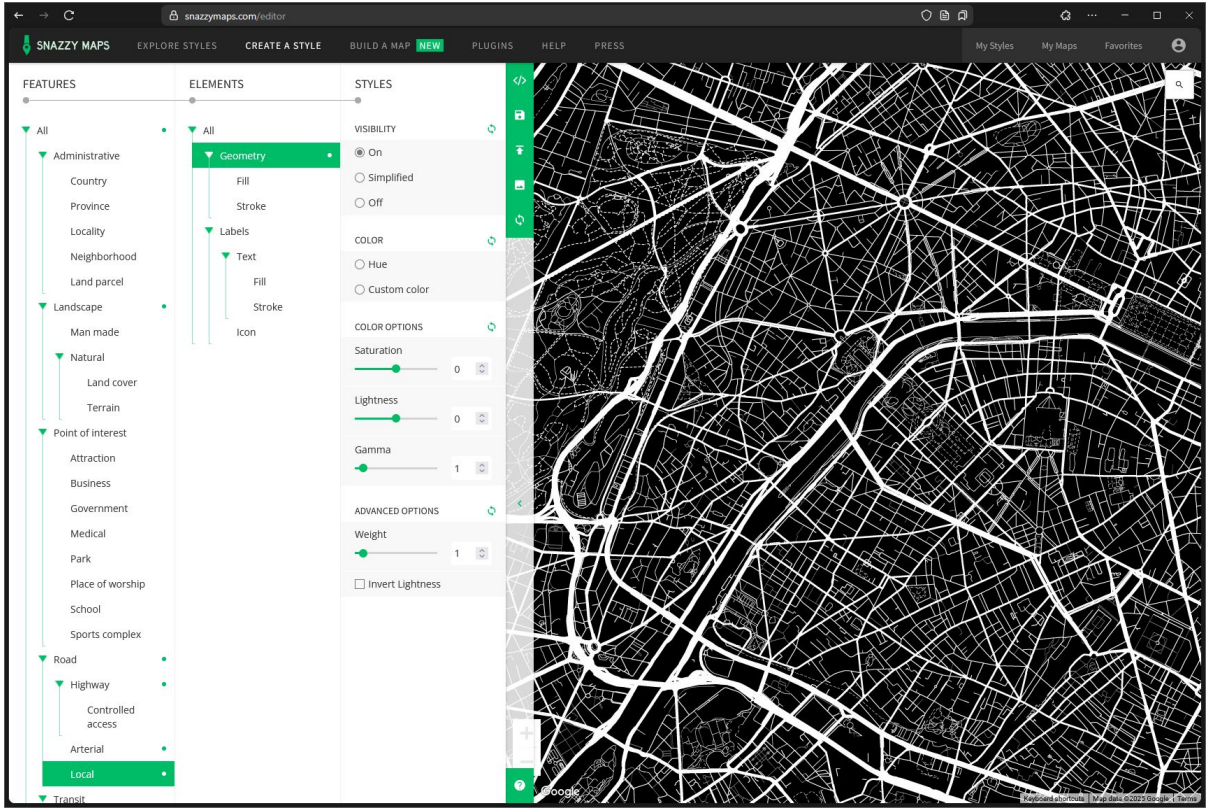
Set background color

- Landscape -> Geometry ON
- Landscape -> Geometry -> Color BLACK (#000000)



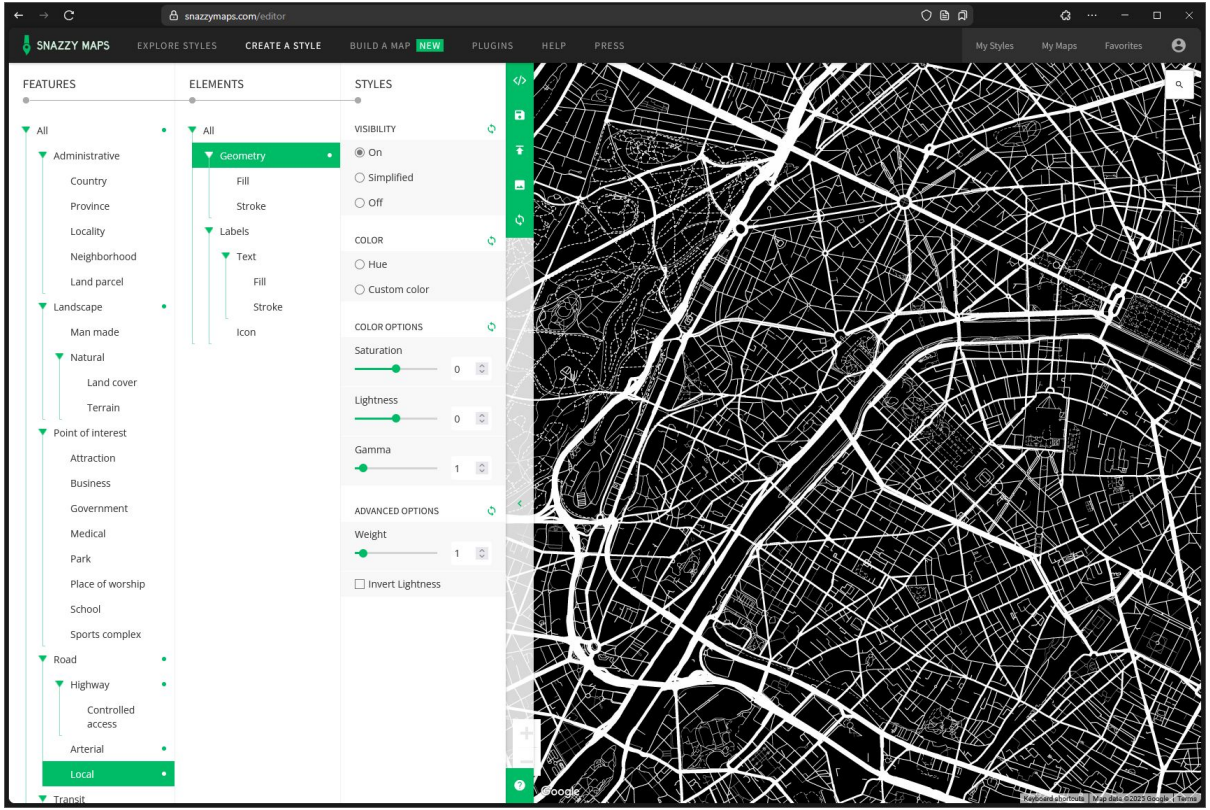
Road layer

- Road -> Highway -> Geometry ON
- Road -> Arterial -> Geometry ON
- Road -> Local -> Geometry ON
- Road -> Geometry -> Color WHITE (#ffffff)



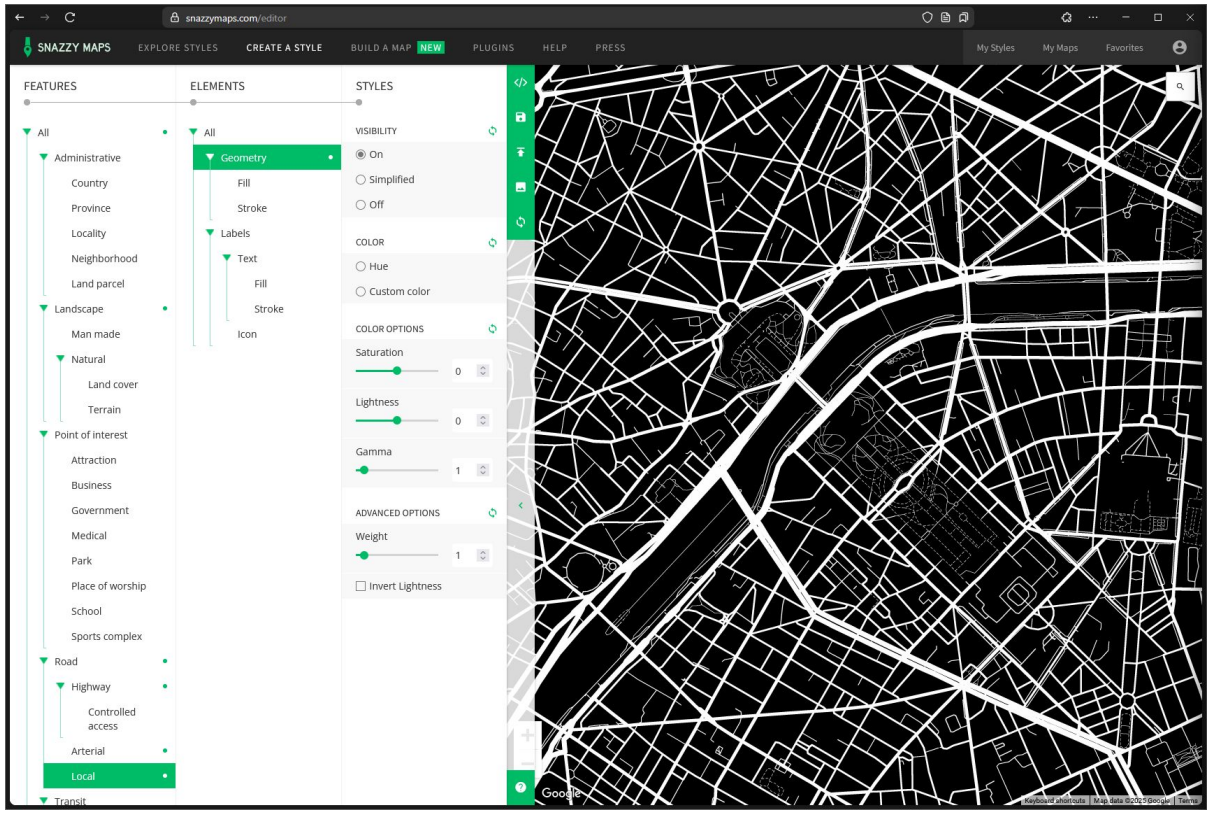
Framing your map area

- Use the location you remember from 4 slides ago
- Set a desired zoom by pressing the [+/-] buttons in the bottom left of the viewport
  - **REMEMBER HOW MANY TIMES YOU CLICK ZOOM OUT!**
  - in this example twice



Dialing in road thicknesses

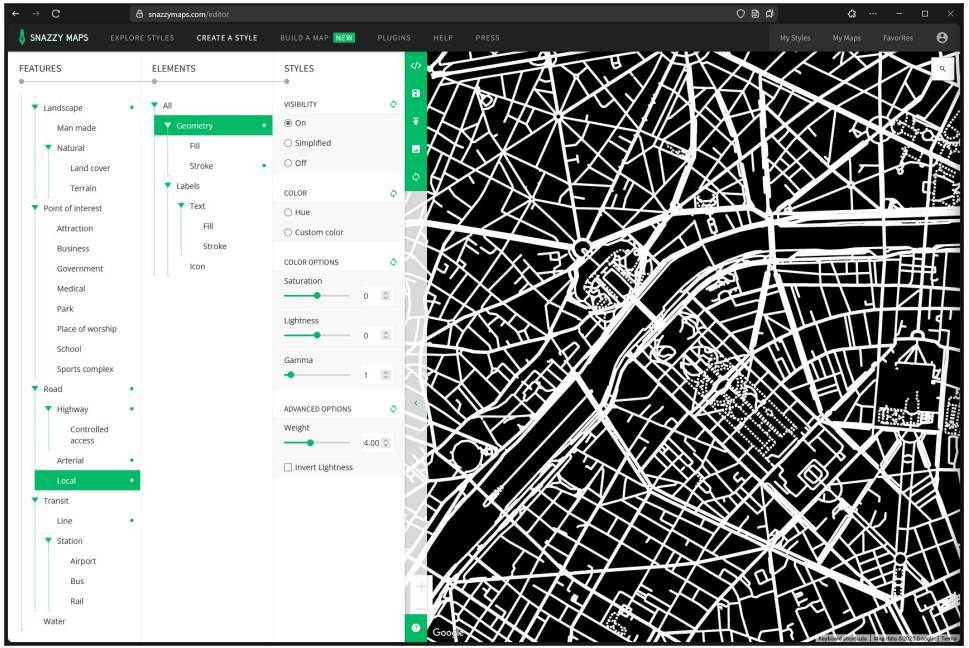
- Everything black will get cut out, so you want your roads to be decently thick to not break
- This example is BAD!!! The thin lines will break when we cut!!!



Make thick lines

- Set [Road type] -> Geometry -> Weight
- You can also turn off certain road types (especially highways) if they're annoying
- Note: dashed paths will not get properly cut
- Another note: In the interest of time, try to minimize the number of roads by optimizing your zoom and weights

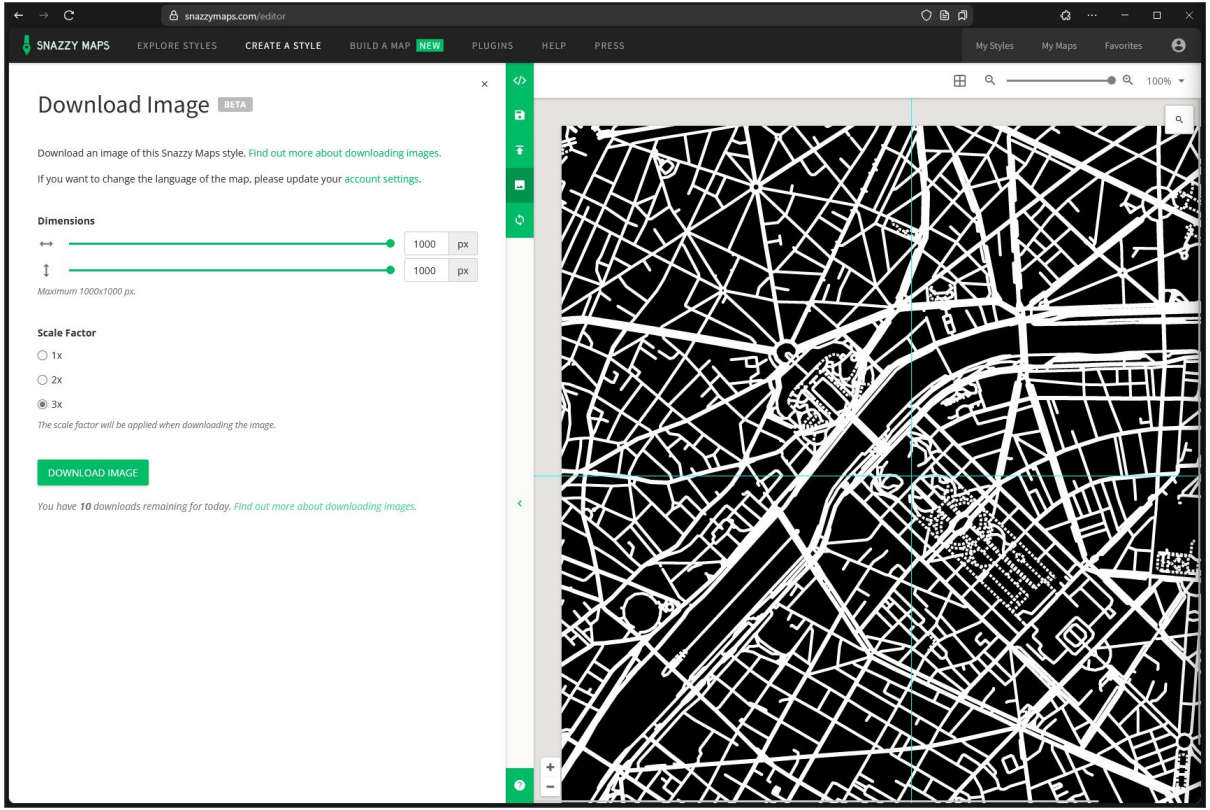
*if you're seeing weird haloing like this, turn off the **stroke** for whatever feature you're editing*



Save the image

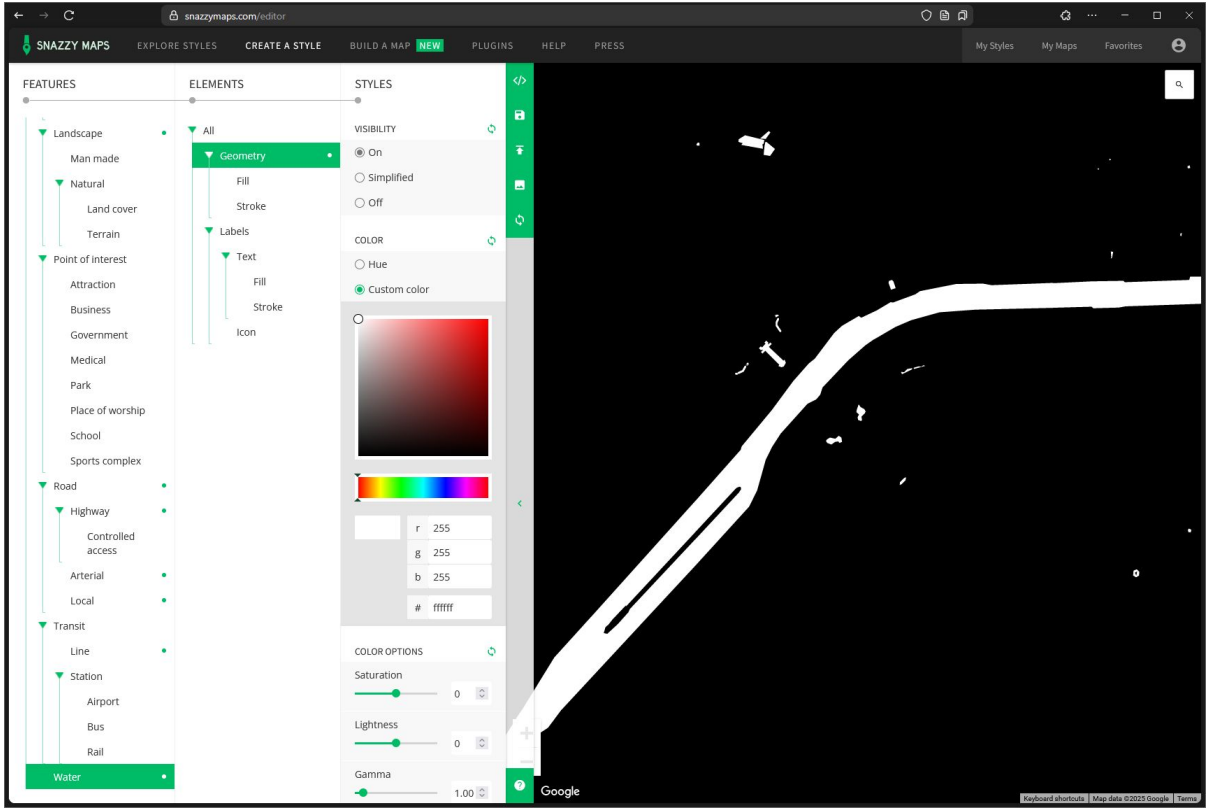
- Go to the download image tab and max out the dimensions/scale factor
- RESET YOUR LOCATION AND ZOOM!
- Download image
- The limited download counter is total BS

Even in this example, roads are borderline too thin



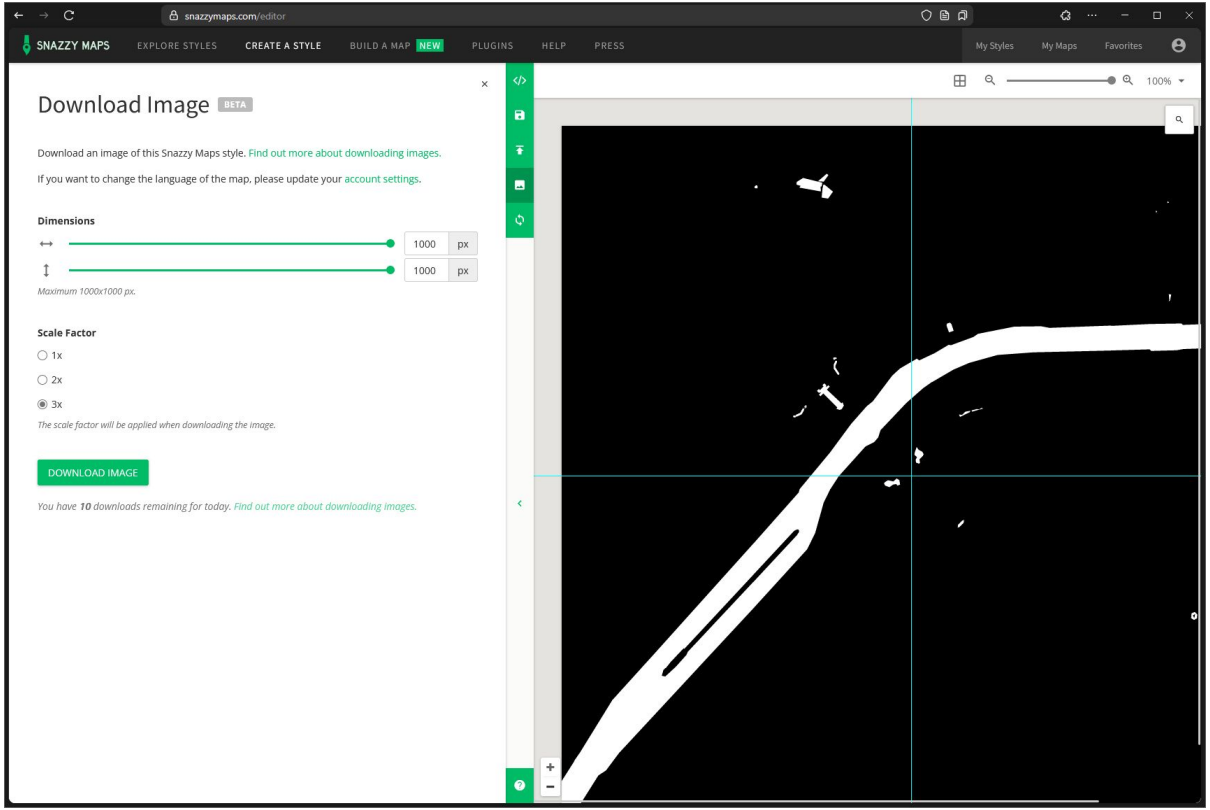
Turn off all roads and turn on water

- Turn off the roads (or train tracks) so we can work on the water
- Turn on water geometry and set fill to WHITE



Save the image

- Go to the download image tab and max out the dimensions/scale factor
- RESET YOUR LOCATION AND ZOOM!
- Download image



Step 2: Preparing the cuts in Illustrator

- I don’t have illustrator on my PC but I wrote down the instructions, I’ll help you when it’s your turn

Preparing road layer

- Import road layer image
- Resize to 4.7in
- Center in frame
- Crop to 4.45 x 4.45in
- Image trace B/W logo
    - Image trace settings: **IGNORE WHITE**
- Click “Expand”
- Turn off fill
- Set stroke to vector cut settings
    - color: #ff0000, width: .072in

Preparing water positive (acrylic)

- Import water layer image
- Resize to 4.7in
- Crop to 4.45 x 4.45in
- Image trace B/W logo
    - Image trace settings: **IGNORE BLACK**
- Click “Expand”
- Turn off fill
- Set stroke to vector cut settings
    - color: #ff0000, width: .072in

Preparing water negative (aluminum)

- Copy water positive and center in frame

Preparing backplate (optional)

- You can add some text to raster onto your backplate (perhaps the coordinates or name of the place idk)

Step 3: cut stuff

- I will help with settings and getting the cut ready
- This part is pretty boring, lots of waiting around

bada bing bada boom

- Carefully insert the water positive into the negative
  - Can use a mallet to help it set in
- Grab some M4 16mm (or 12mm) bolts and locknuts and finger tighten through the 4 holes

The end :)

Thank you for coming!!!!