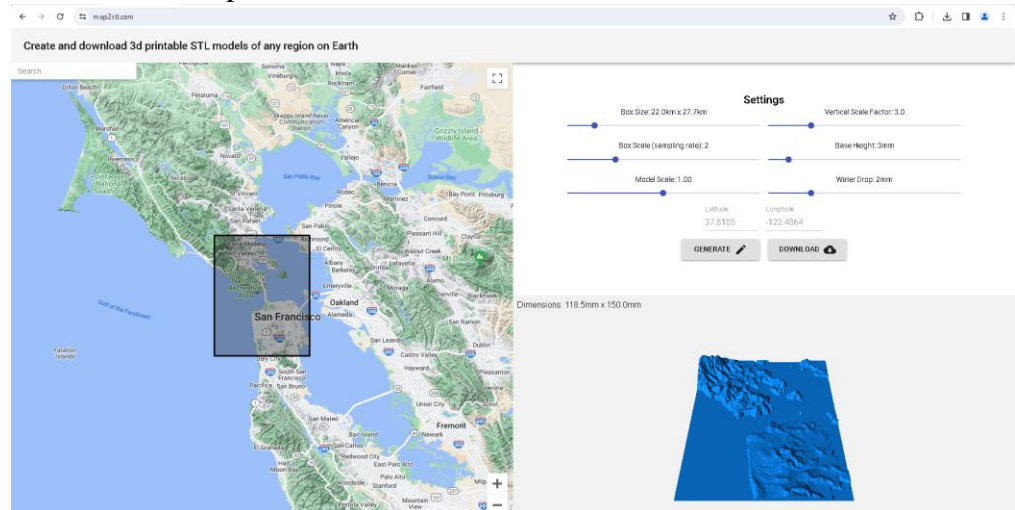


## Laser Cut Terrain Tutorial

1. Create a STL of your terrain
  - a. Model 2 STL: <https://map2stl.com/>
    - i. Online software, easy to use. Generates a preview of model before download
    - ii. May help to have to increase vertical scale and water drop for a more dramatic landscape.

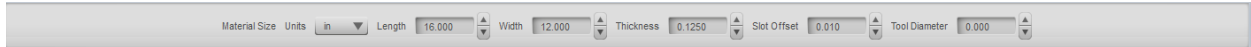


- b. Fusion 360: Use modeling tools to create imaginary terrain
2. Load STL into Slicer for Fusion
    - a. Slicer for Fusion install: <https://www.autodesk.com/support/technical/article/caas/tsarticles/ts/3yg7zznS94MHNDG7KMV8Qg.html>
    - b. This program is free to download and use, but Autodesk no longer maintains it.
  3. Using Slicer for Fusion

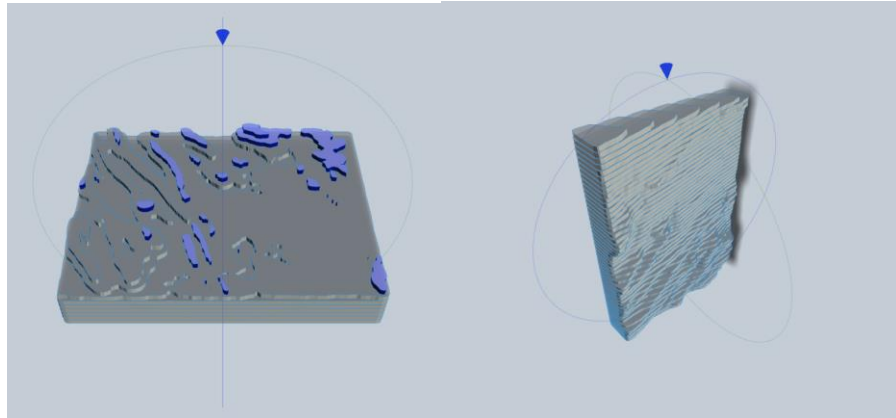


- a. First, import your .stl into Slicer for Fusion

- b. Next, click the gear next to manufacture settings to change the thickness, length, and width of the material you plan to make your terrain out of.
  - i. Ex: If my stock is 0.125" thick wood and the piece is 12" X 18" I would enter them as follows:

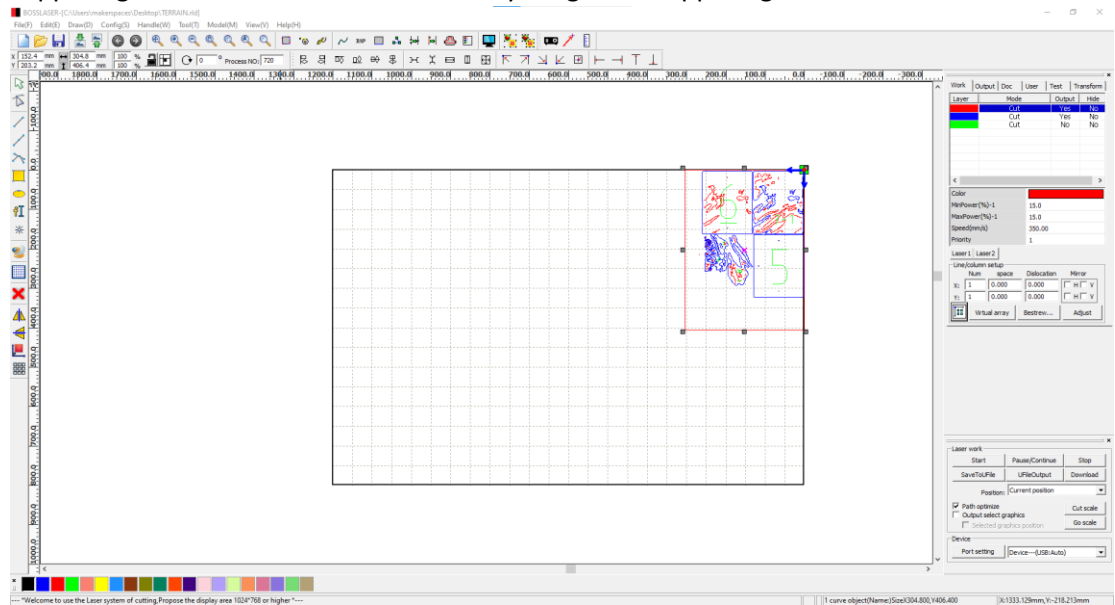


- c. Under "Construction Technique" click "Stacked Slices"
- d. Click "Modify Form" to thicken the terrain model slightly to reduce extraneous information
- e. Click "Slice Direction" to change the angle of the slices. See example below.



4. Export plans
  - a. Click "Get Plans"
  - b. Change the file format to .dxf and the unit to mm
  - c. Saves as a zip file. **YOU WILL NEED TO UNZIP THIS FILE TO COMPLETE THE NEXT STEPS**
5. Create Laser File in RD Works/Laserworks
  - a. Open RD Works V8 or install here (labeled "Laserworks V8"): <https://bosslaser.com/laser-software/>
  - b. Import your .dxf files into this program.
    - i. **Check the dimensions of the objects when you load it in by clicking on the outer extents of your object and looking at the dimensions immediately under the import function**

- c. Delete all extraneous material and arrange items into the most efficient array. Click the “upper right corner” Button to move everything to the upper right corner.

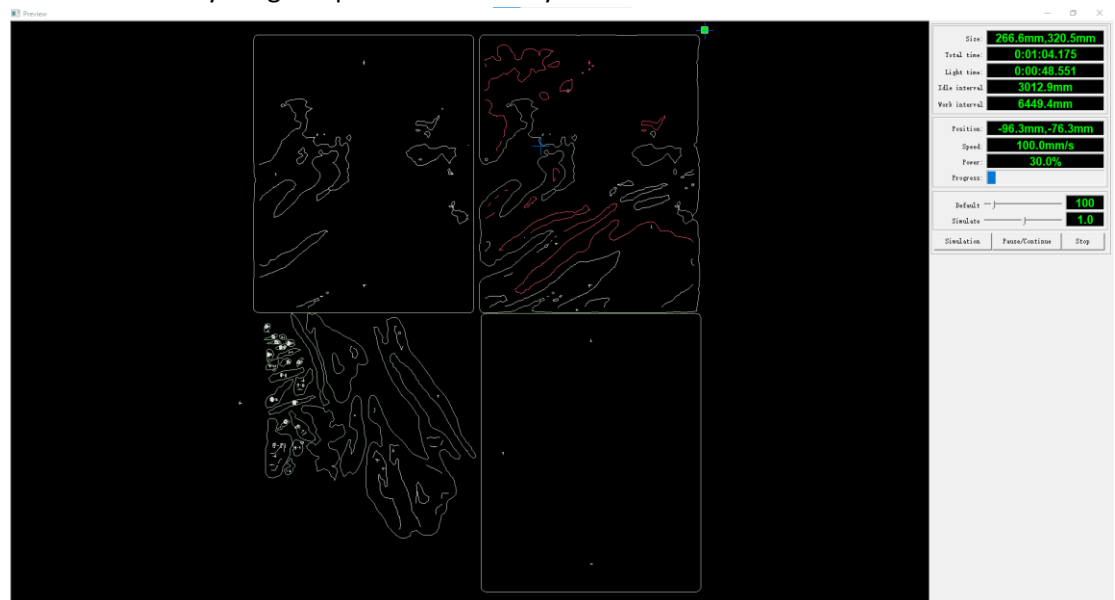


## 6. Layers

- a. This file has 3 different cut layers. The red is low power and high speed for etching, the blue is for high power and low speed for cutting. Green is “no output” and only for reference
- b. Make sure your etching layer is above your cutting layer, so that the machine etches before cutting.
- c. **Speeds and power settings will vary greatly depending on the material you are cutting. Please refer to our online resources at [www.makerspaces.wm.edu](http://www.makerspaces.wm.edu) for help.**

## 7. Preview

- a. Click the “preview” button (Computer Monitor Icon) in the upper right-hand corner to ensure that everything will process accurately.



8. Export Machine Path
  - a. When the preview is complete, click “Save to U File” to create the machine path.
  - b. This should save as a .rd file