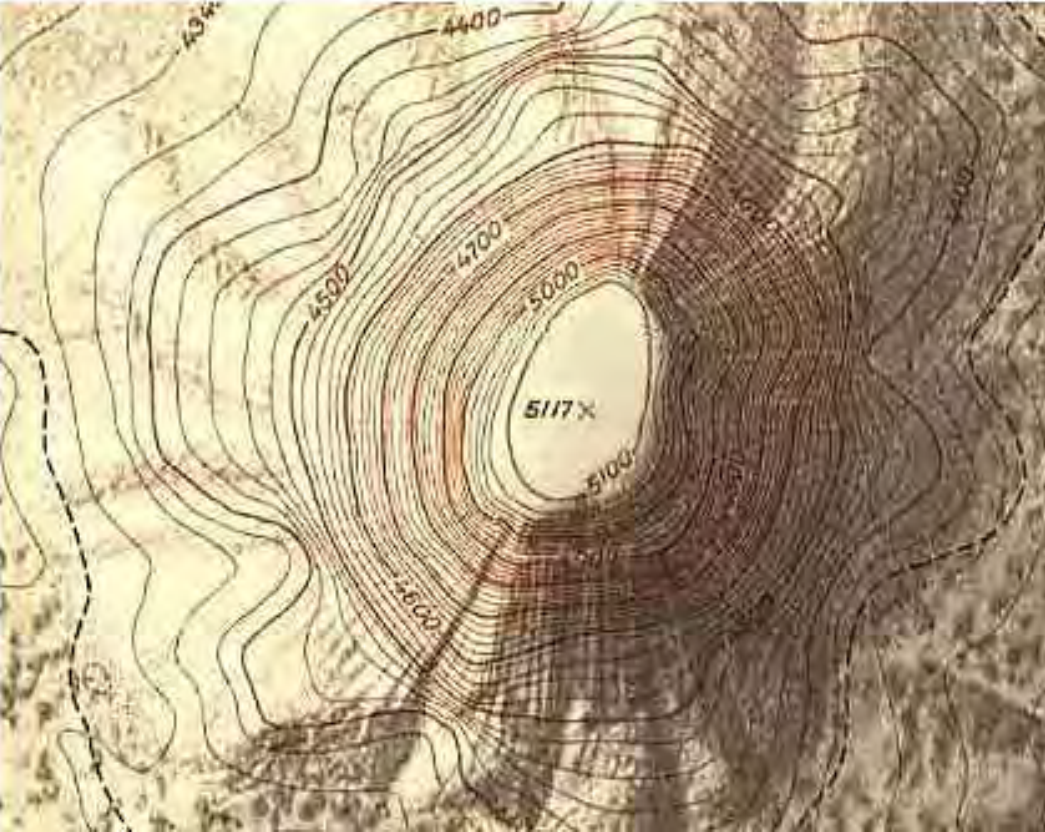


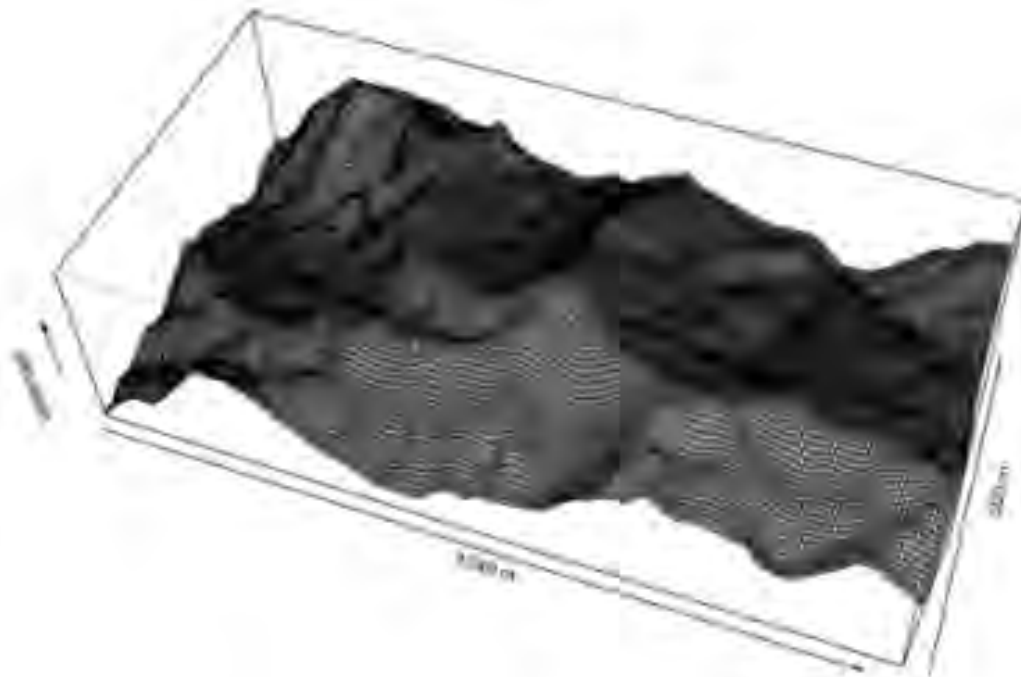
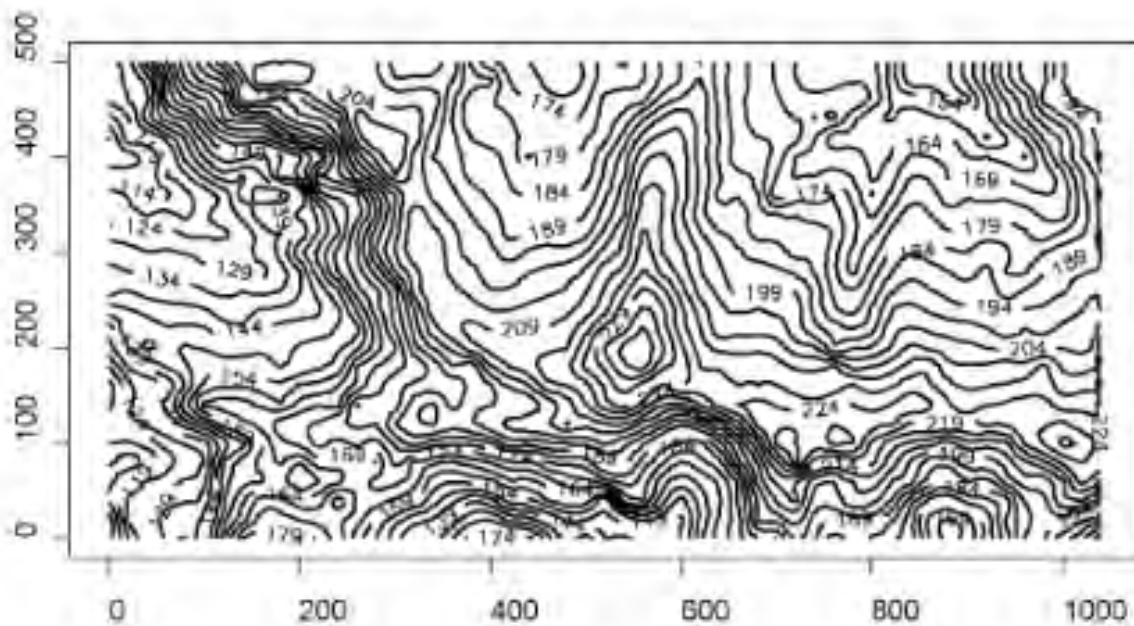
Contour lines are drawn on a map to connect points of equal elevation. These maps are often called “topography” maps because they reflect the topographic changes of the grade of the ground.

The numbers on a map are measurements above sea level.

0 = sea level,
10' = 10' above sea level, etc.



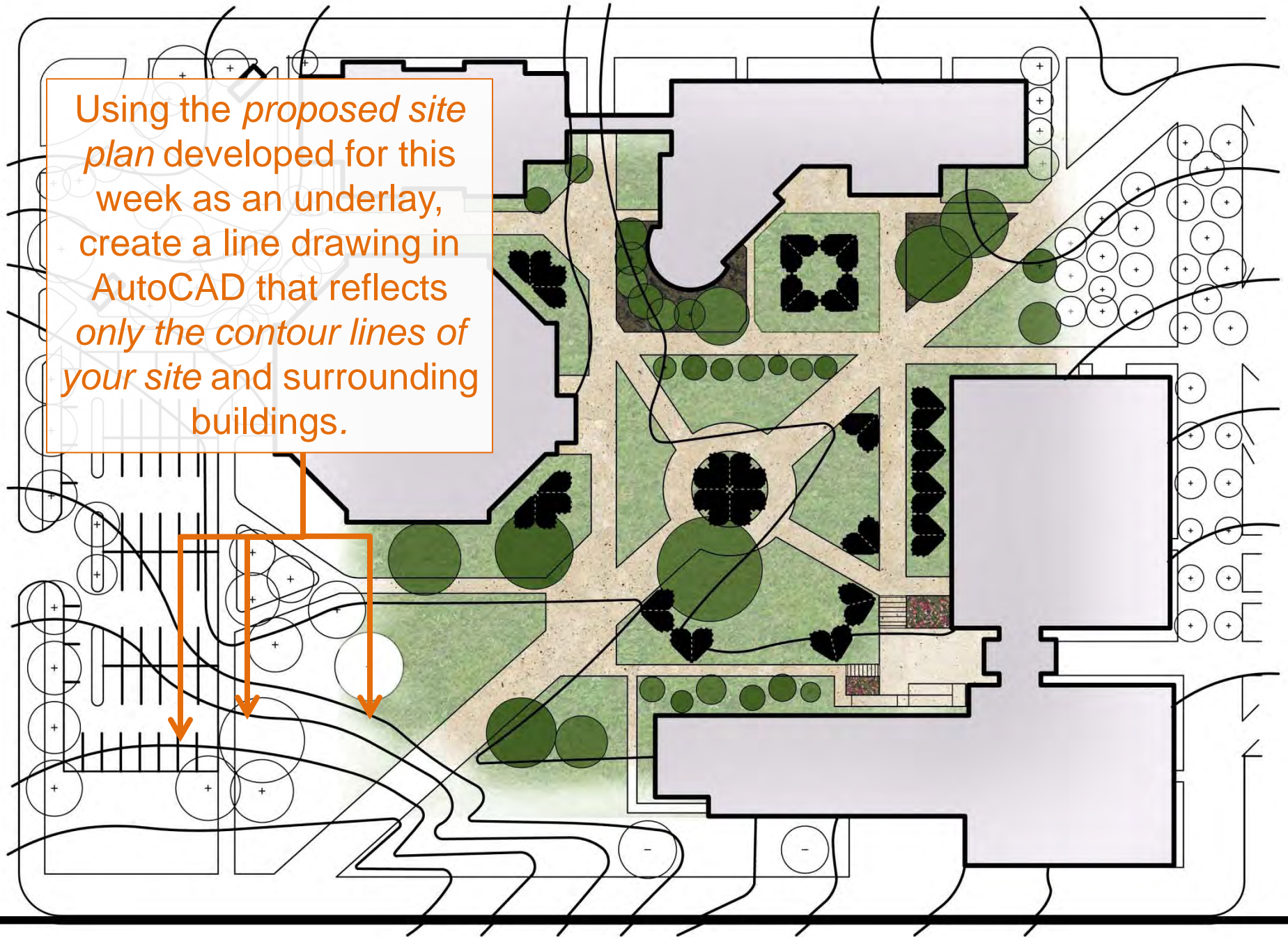
Contour maps can be overlay maps on top of satellite or drawn imagery, or they may be drawings on their own.

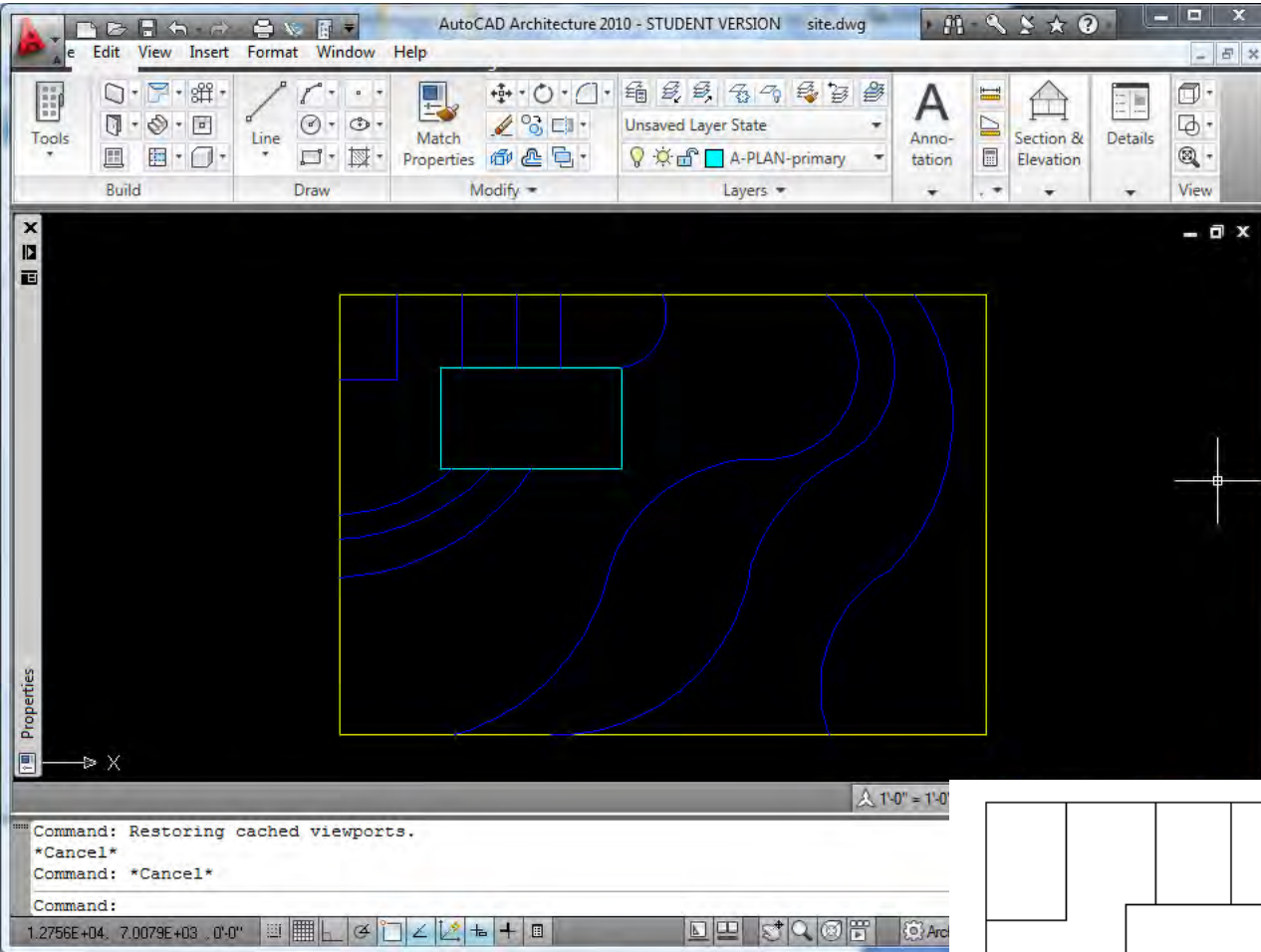


Using contour or topography lines we can generate a 3D model of the ground plane.

If the relation of the site to sea level is unknown, a new point can be chosen as a relative “base point” or 0 marker from which other measurements above and below can be gauged.

Using the *proposed site plan* developed for this week as an underlay, create a line drawing in AutoCAD that reflects *only the contour lines of your site and surrounding buildings.*

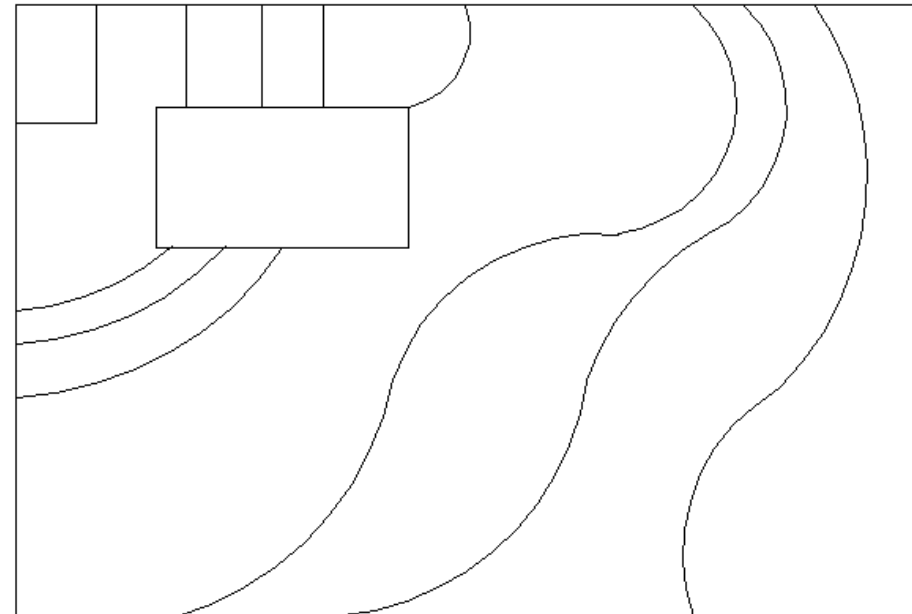




Plot this image to a .PDF file, then convert it to a .JPG using Photoshop, Gimp or other software.

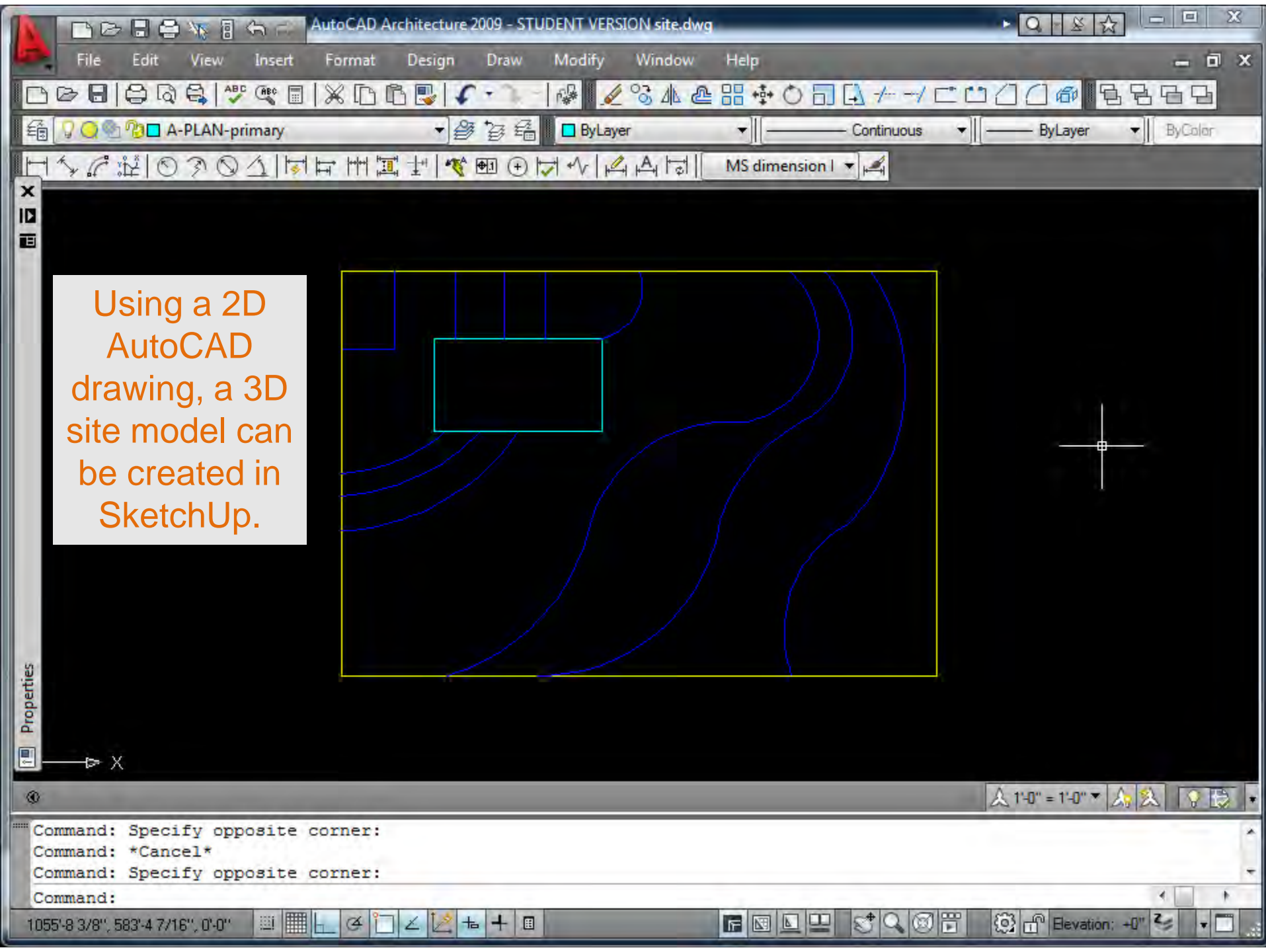
You have 30 minutes to complete this in class.

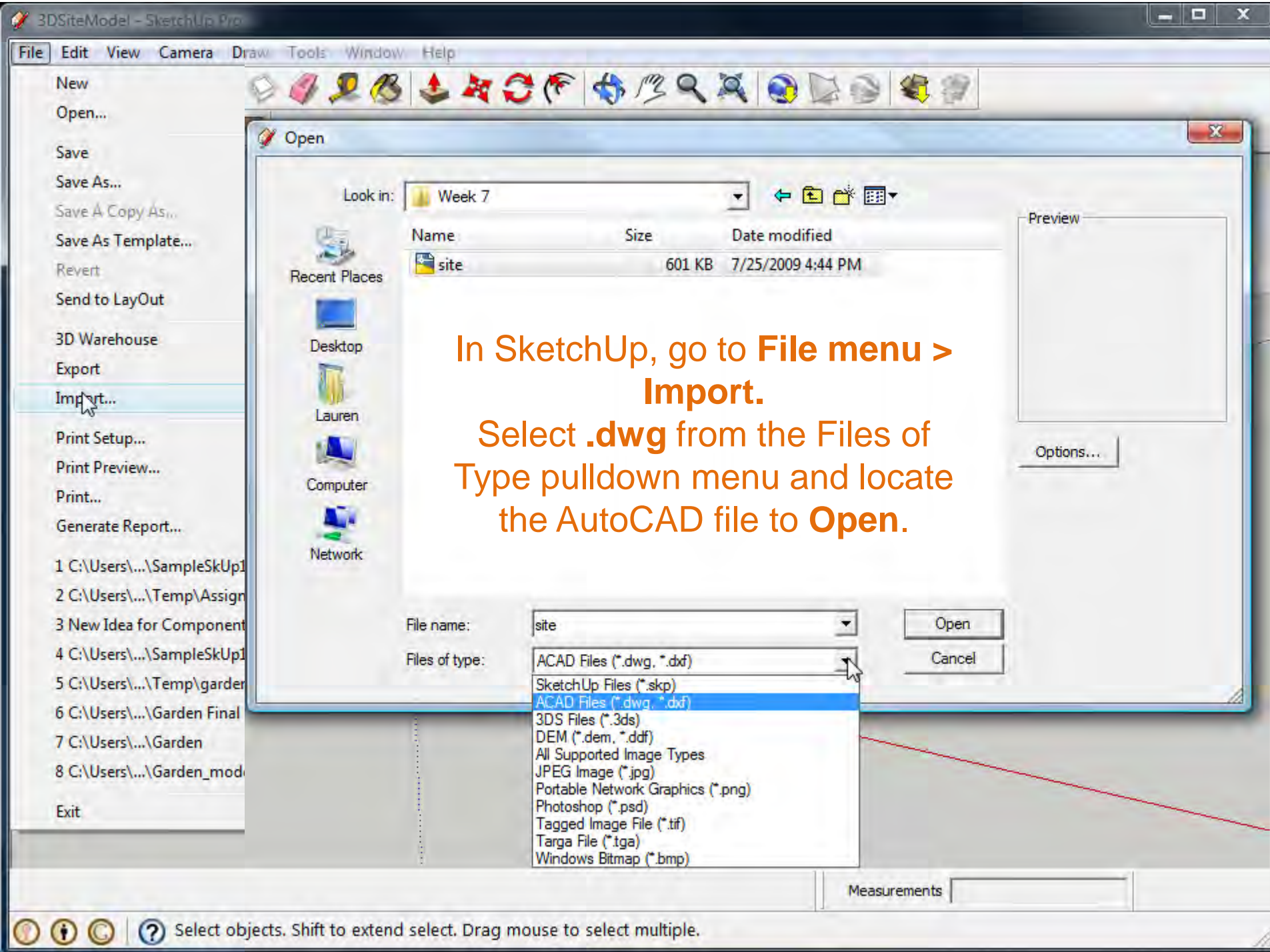
- Keep your initial topography model simple with only a few contour lines, you can always create another one after class.
- Use polylines with arcs to generate curves.

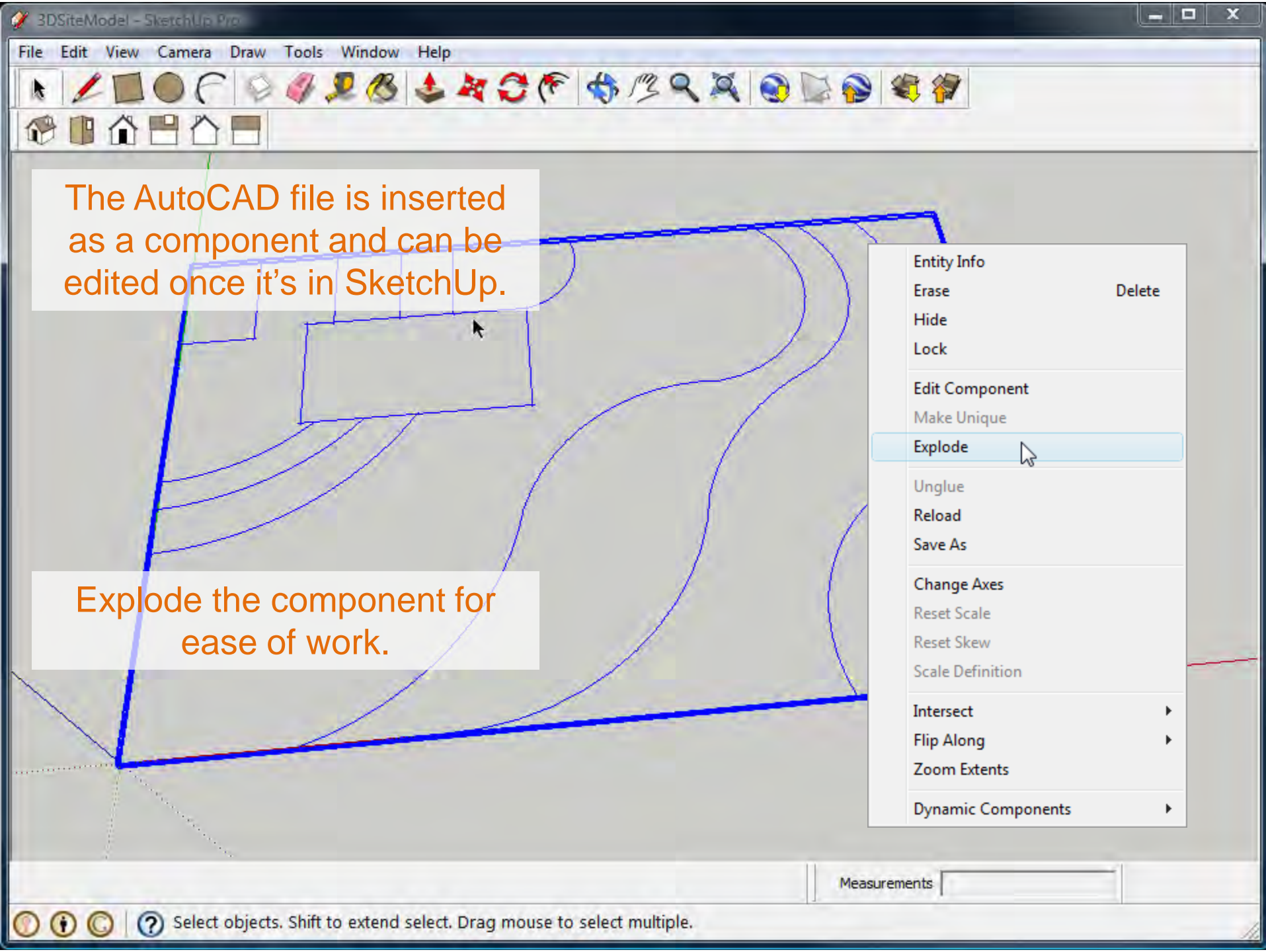


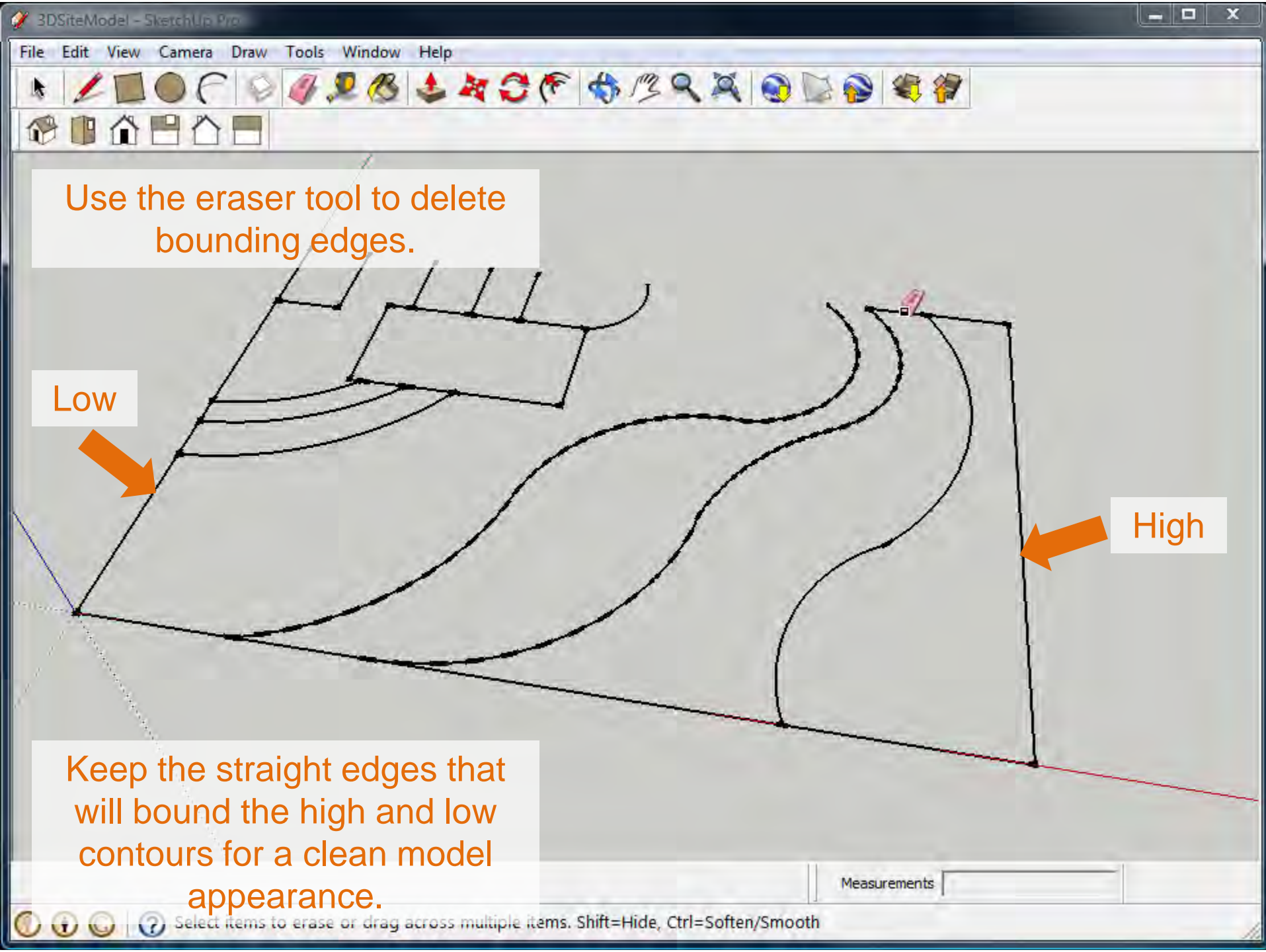
Arch 150
2 Part Tutorial
3D Terrain Models

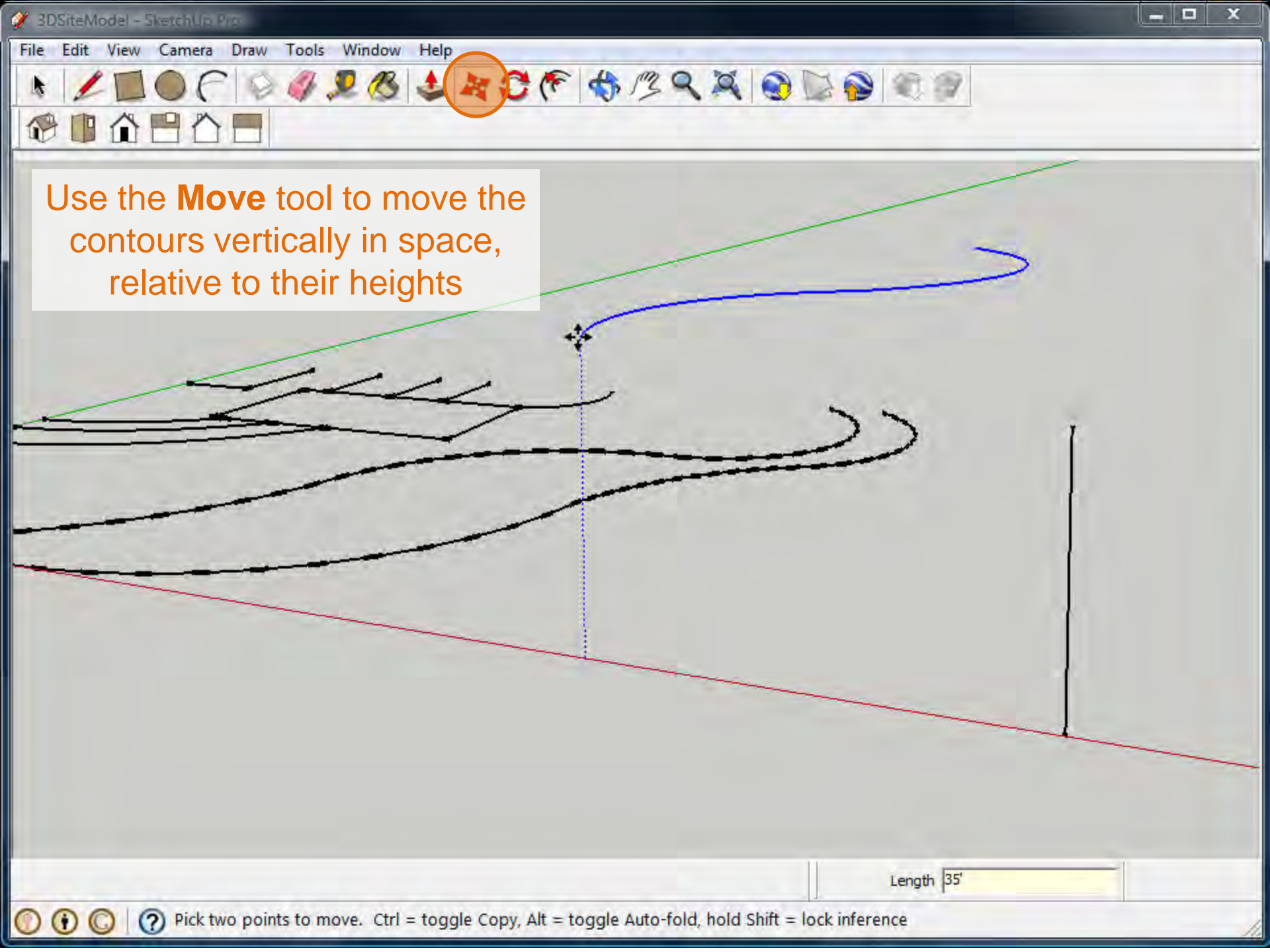
**Part 1: Creating a 3D
Terrain Model with a TIN
(triangular irregular network)**







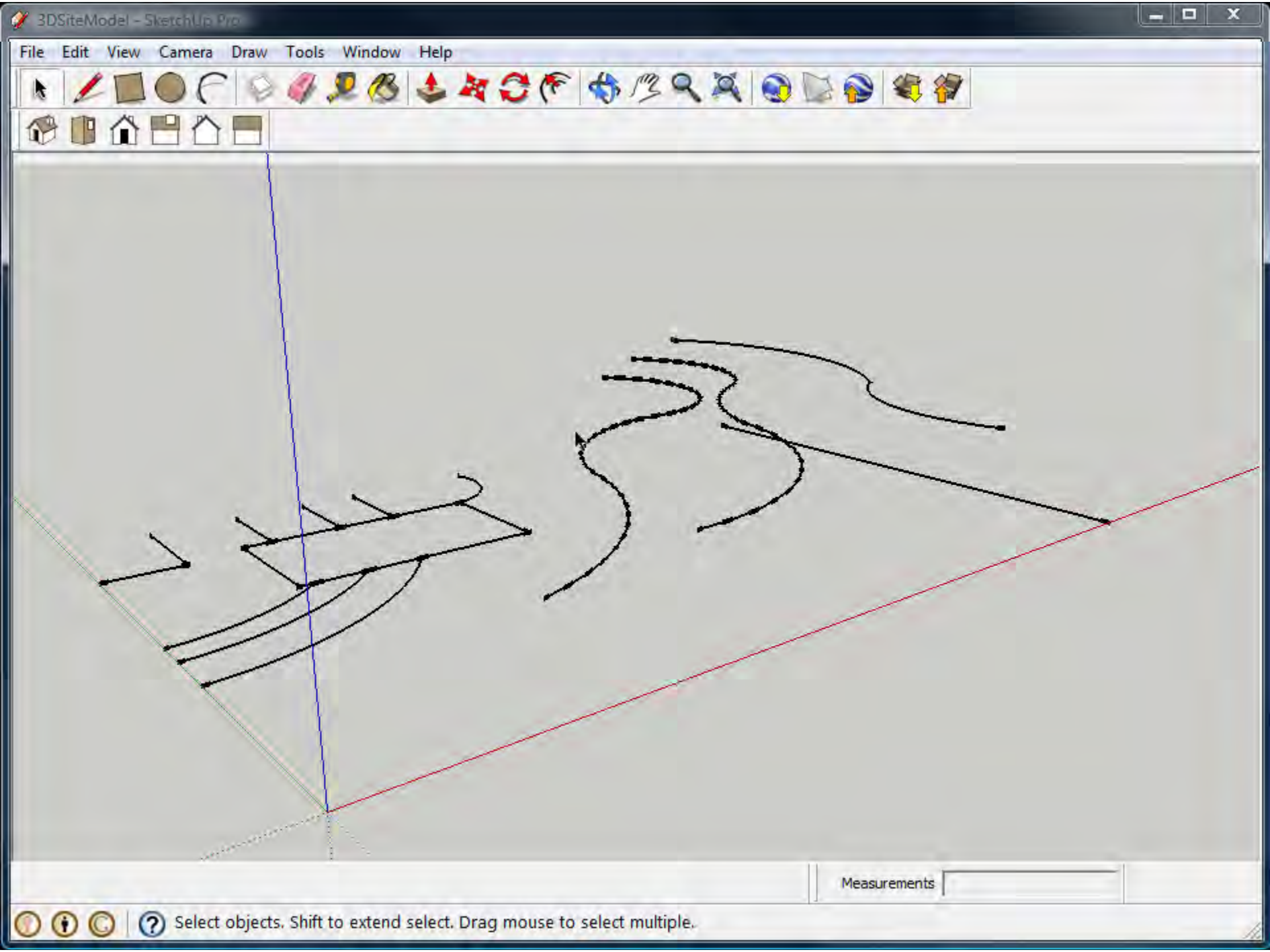


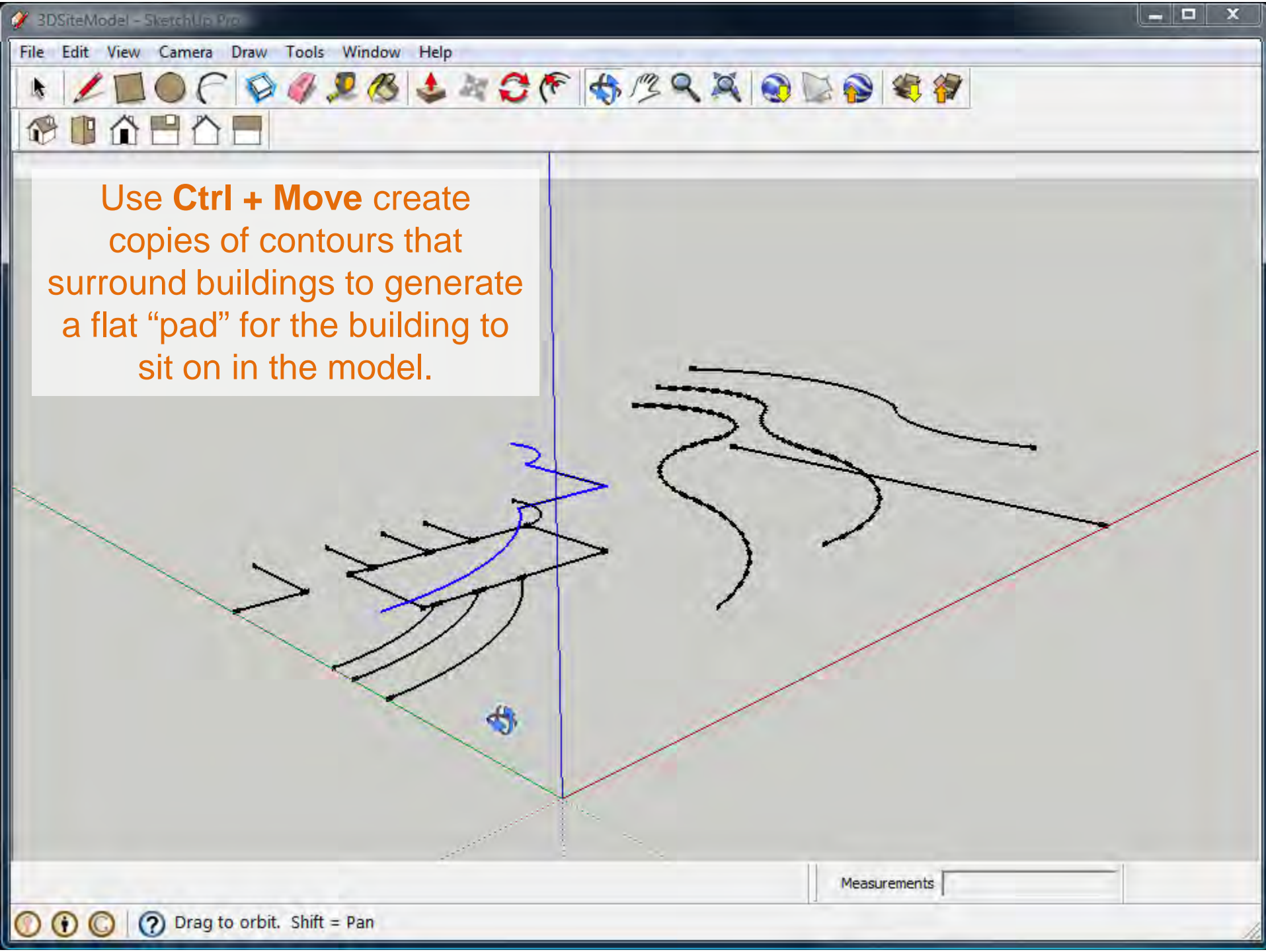


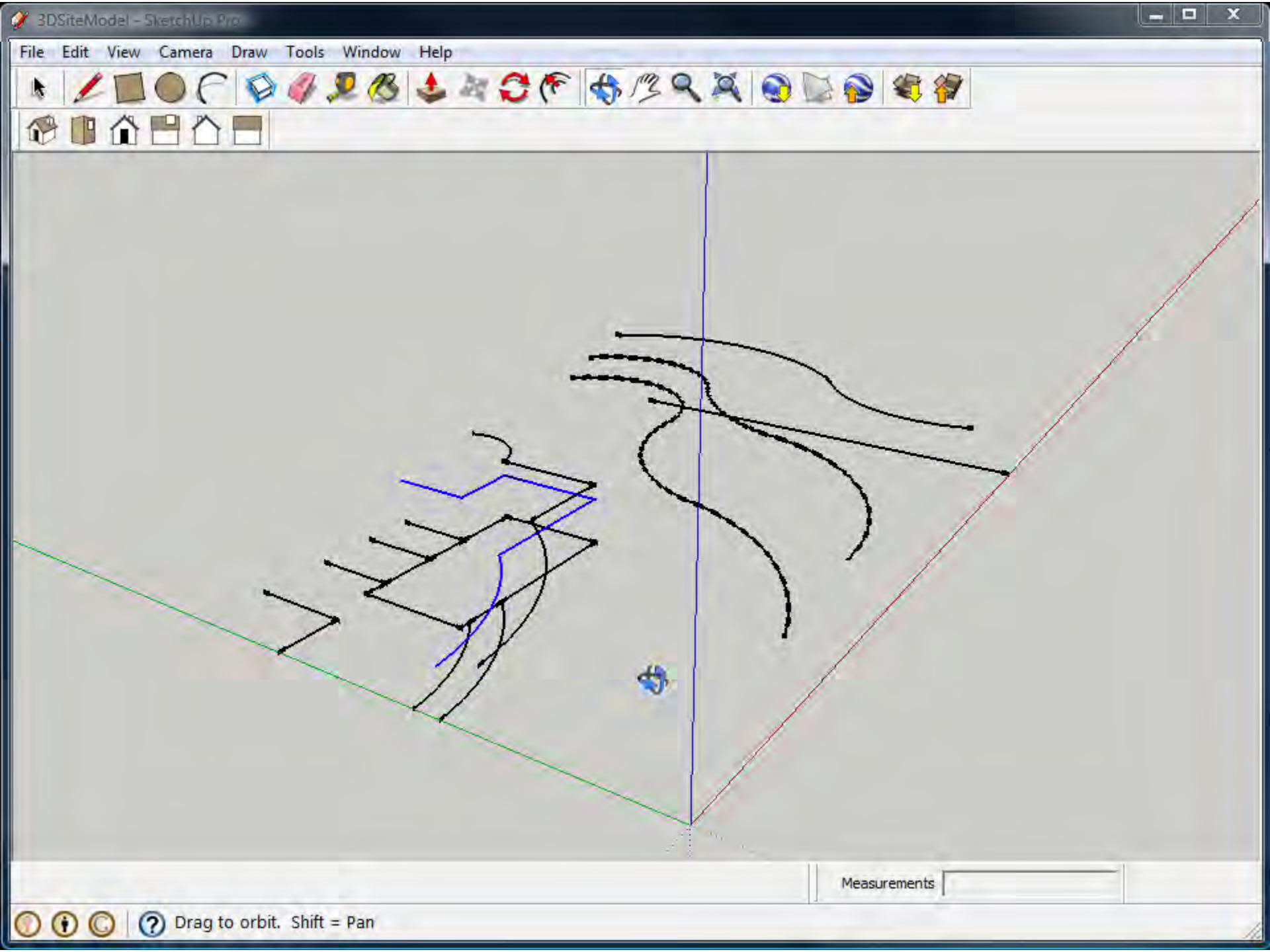
Use the **Move** tool to move the contours vertically in space, relative to their heights

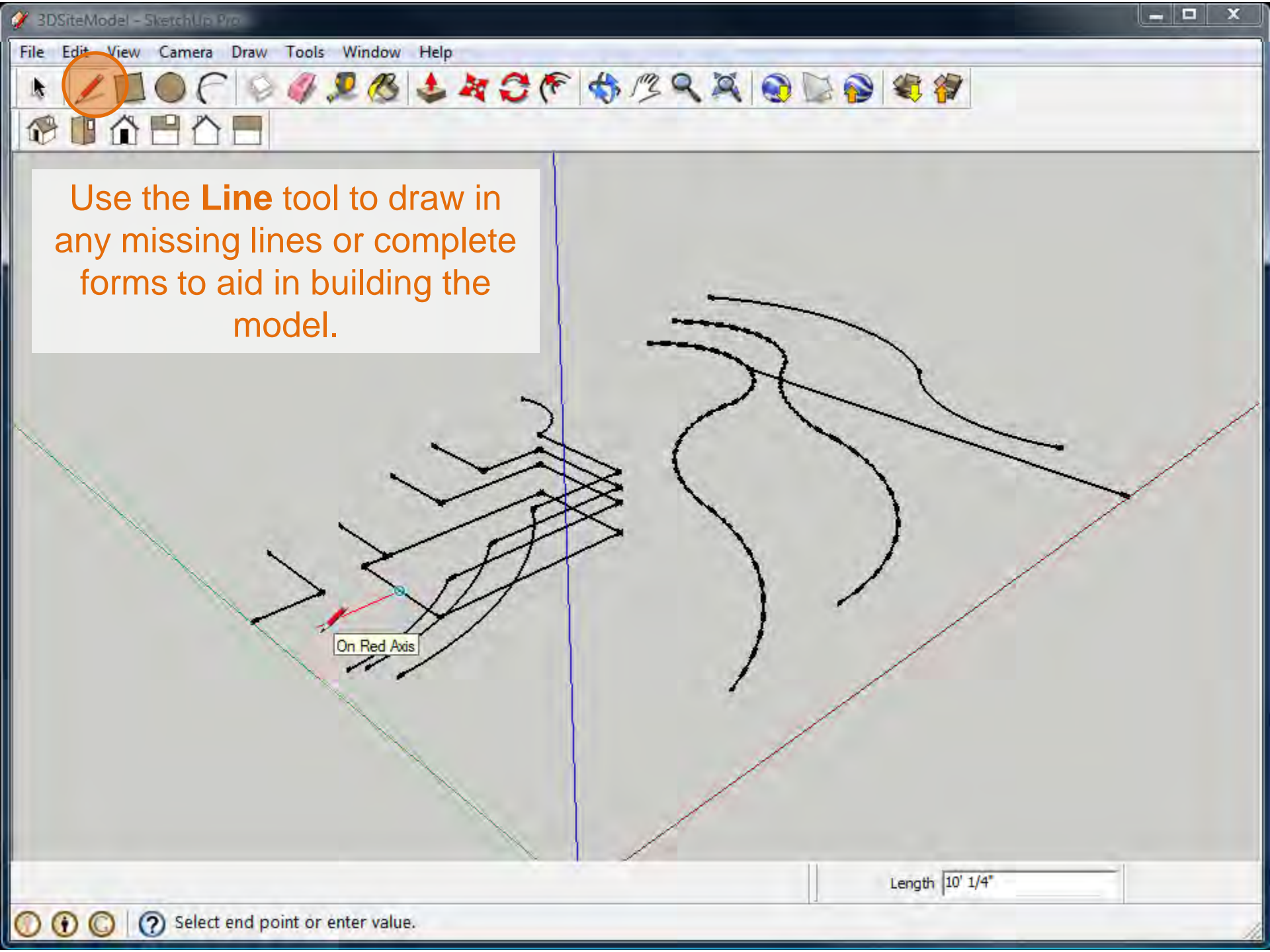
Length 35'

Pick two points to move. Ctrl = toggle Copy, Alt = toggle Auto-fold, hold Shift = lock inference







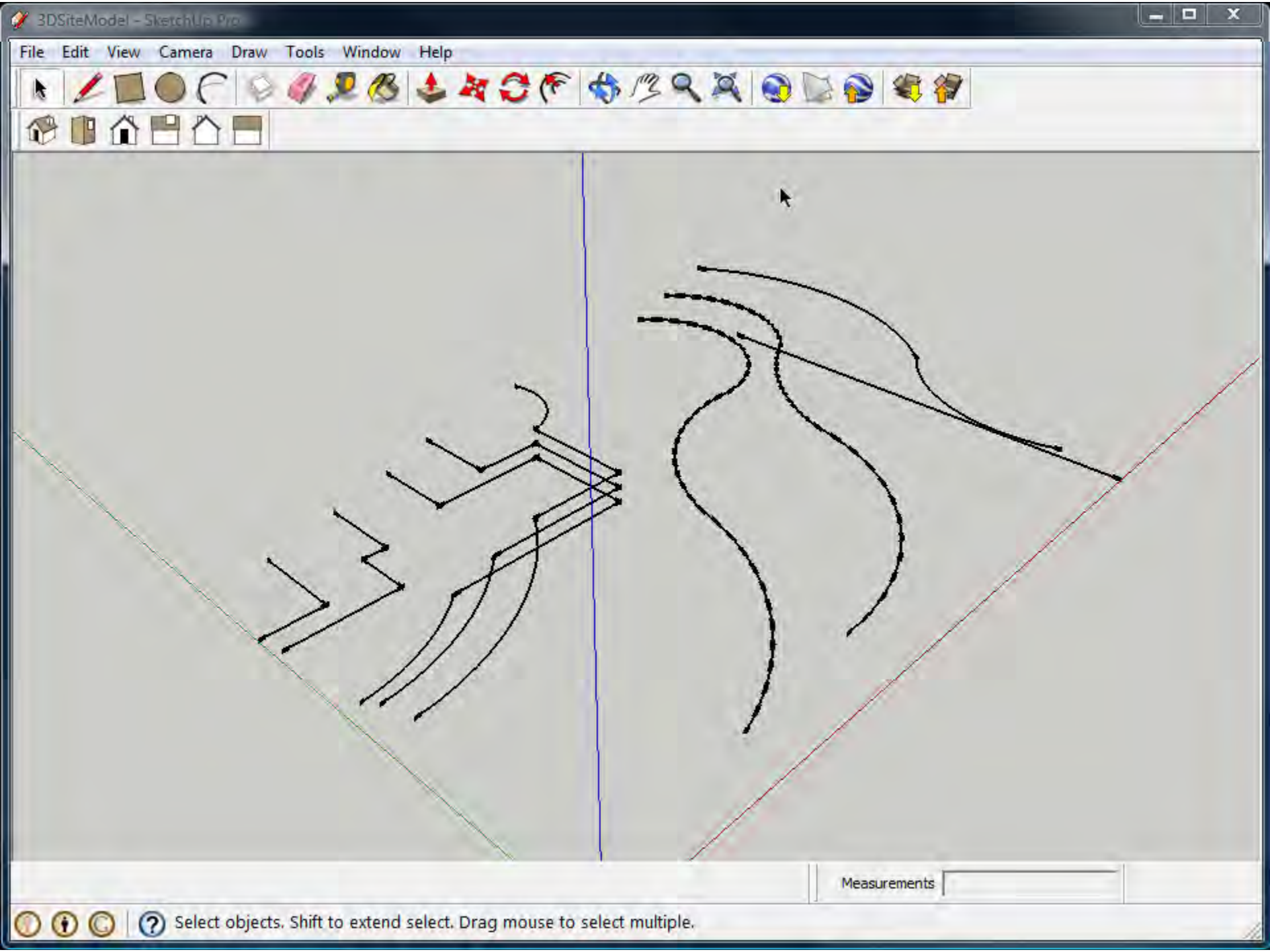


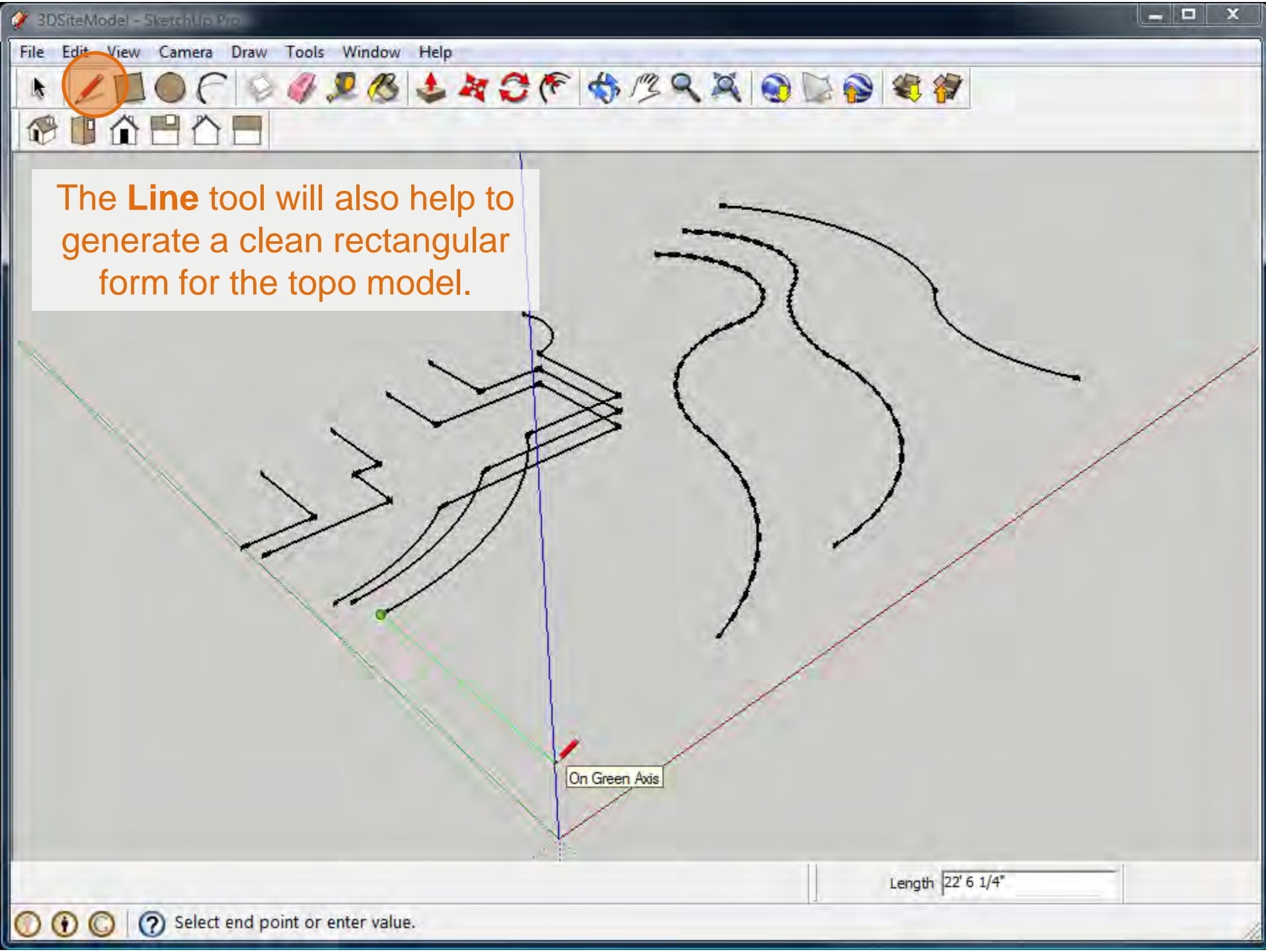
Use the **Line** tool to draw in any missing lines or complete forms to aid in building the model.

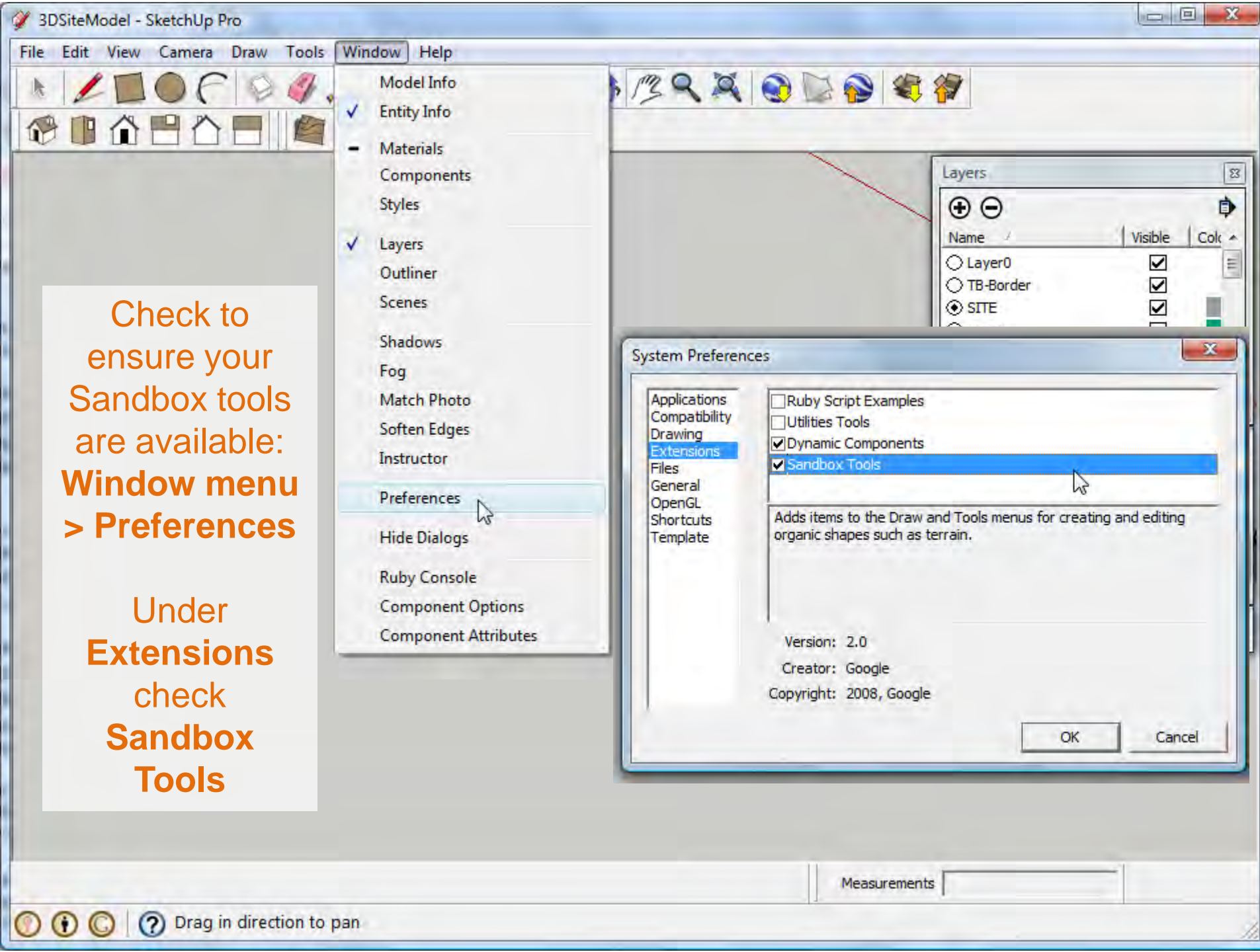
On Red Axis

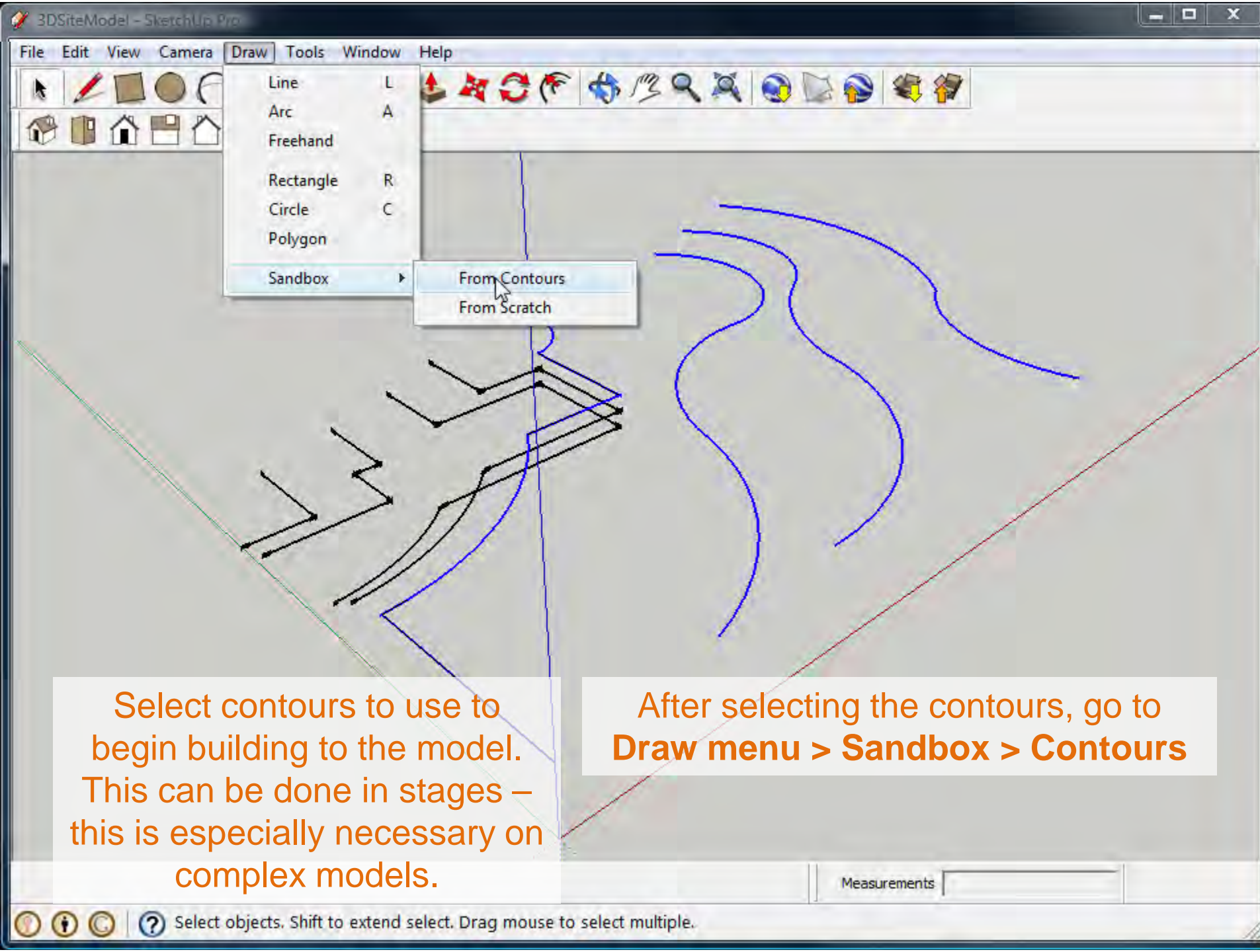
Length 10' 1/4"

? Select end point or enter value.



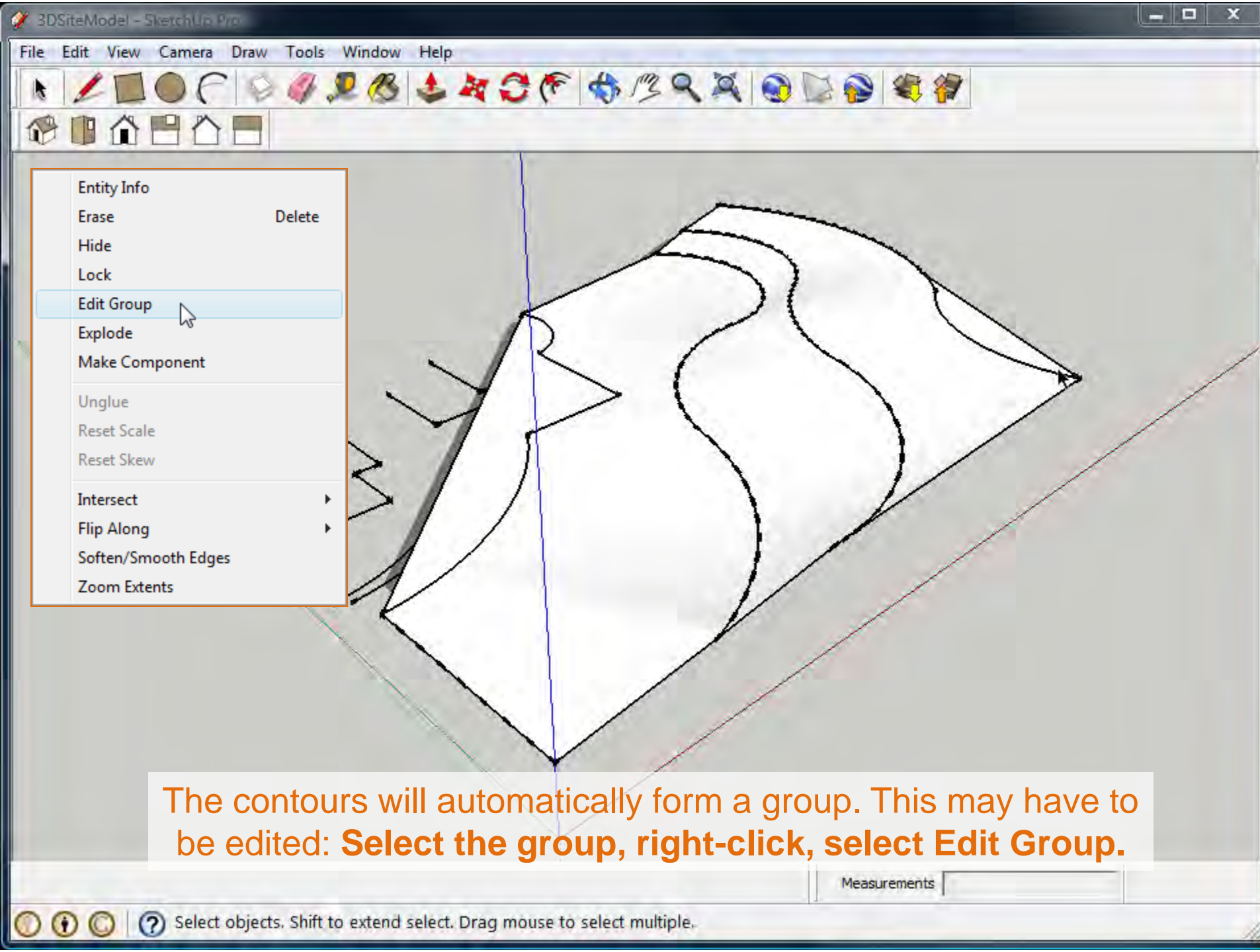




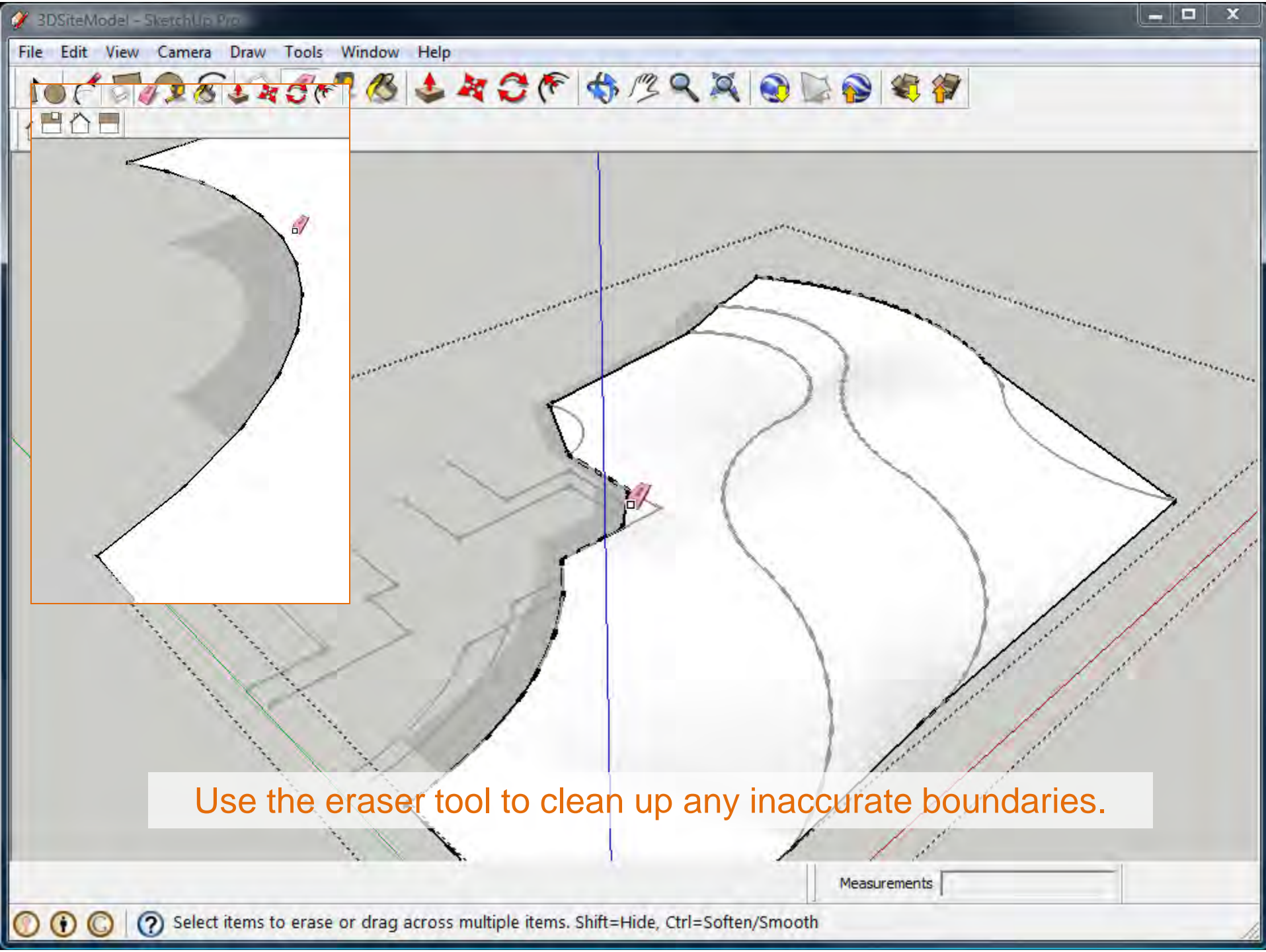


Select contours to use to begin building to the model. This can be done in stages – this is especially necessary on complex models.

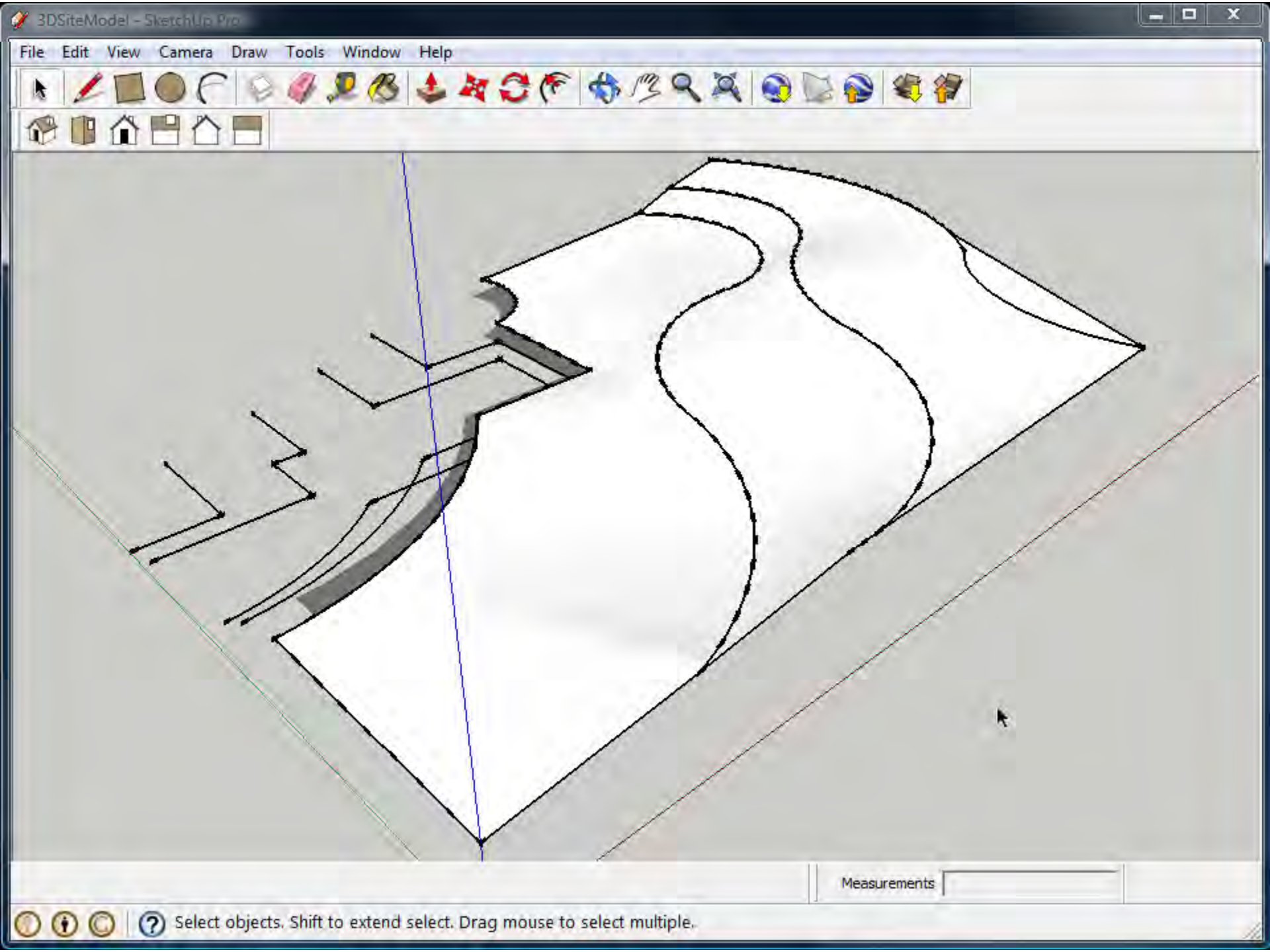
After selecting the contours, go to **Draw menu > Sandbox > Contours**

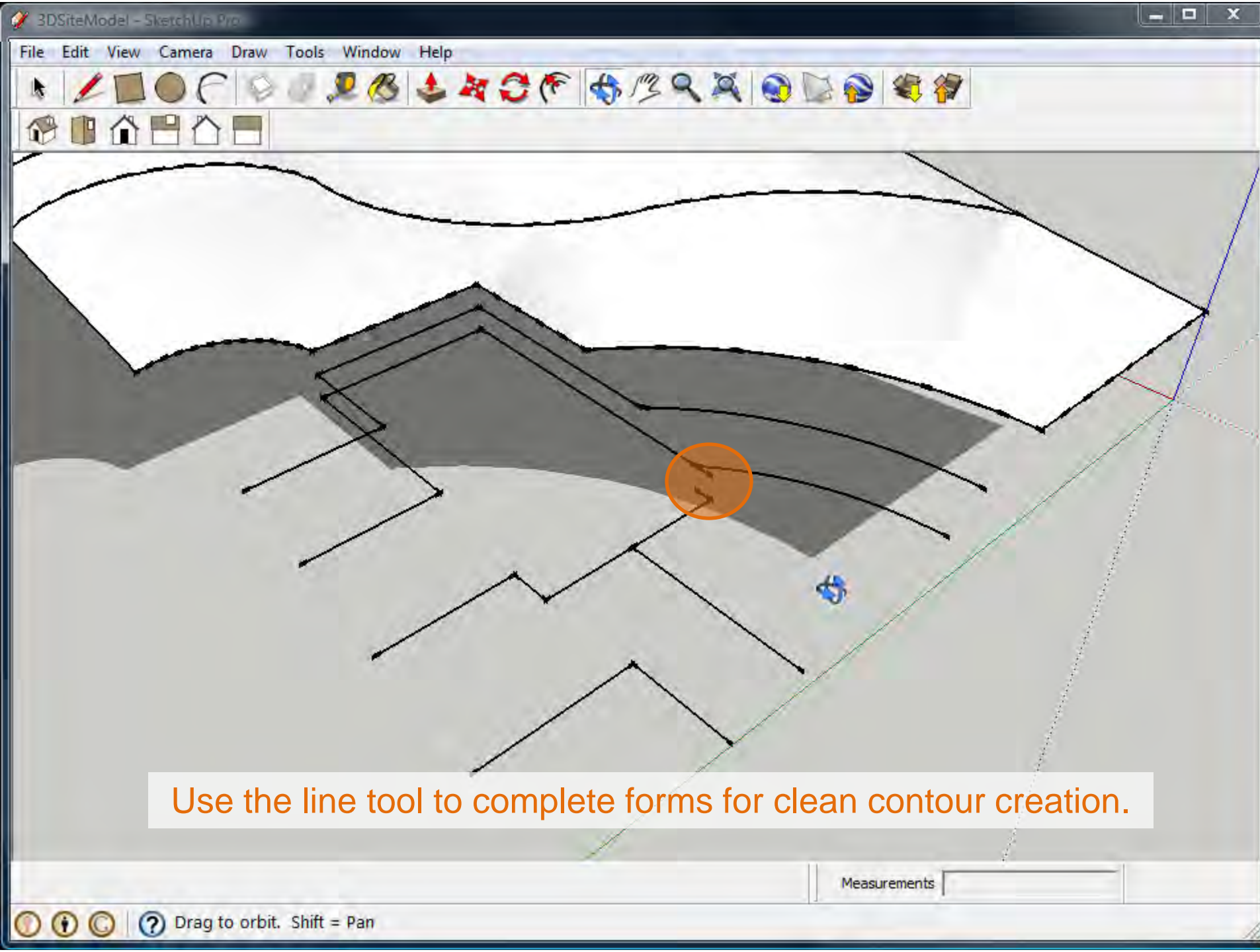


The contours will automatically form a group. This may have to be edited: **Select the group, right-click, select Edit Group.**

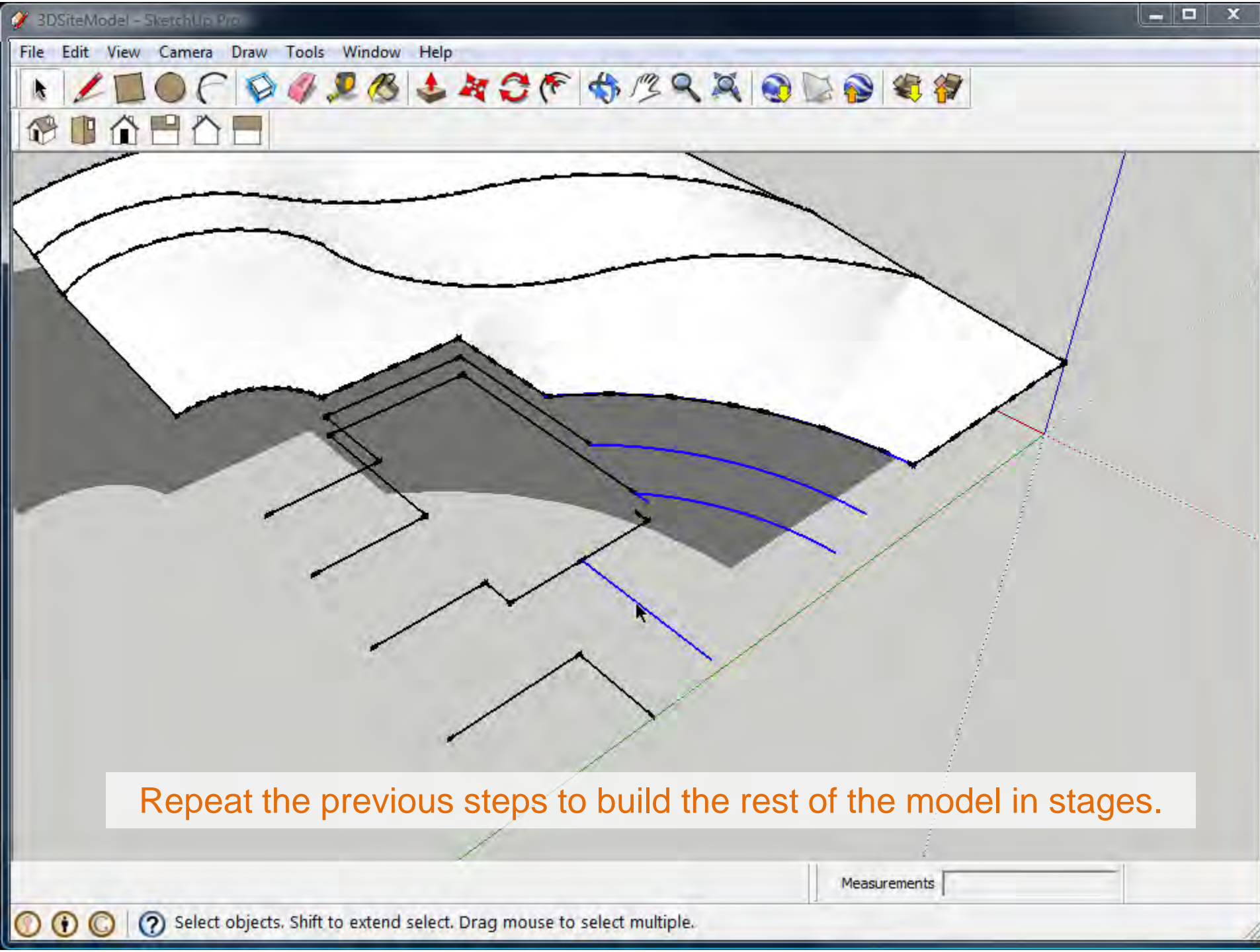


Use the eraser tool to clean up any inaccurate boundaries.

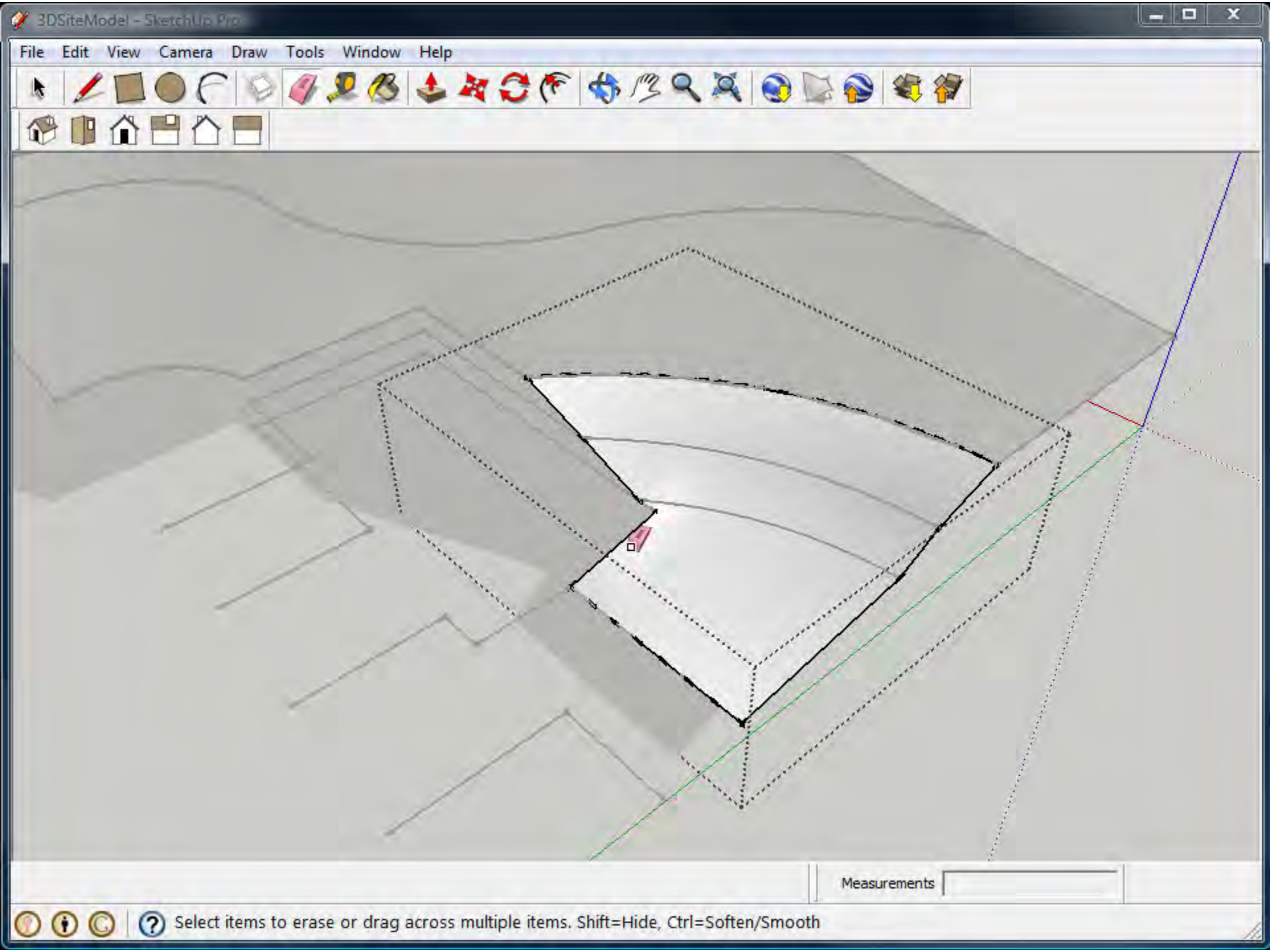


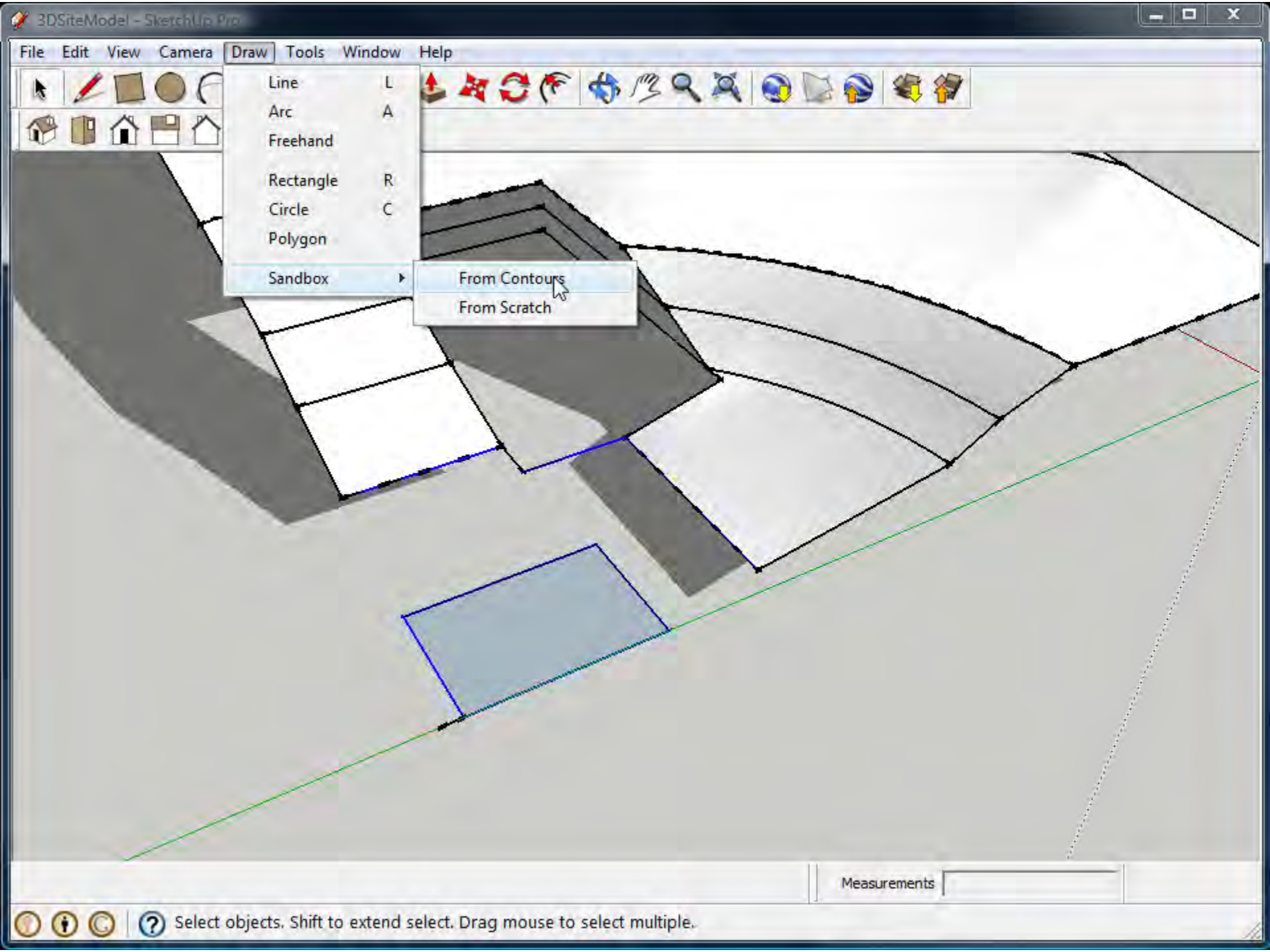


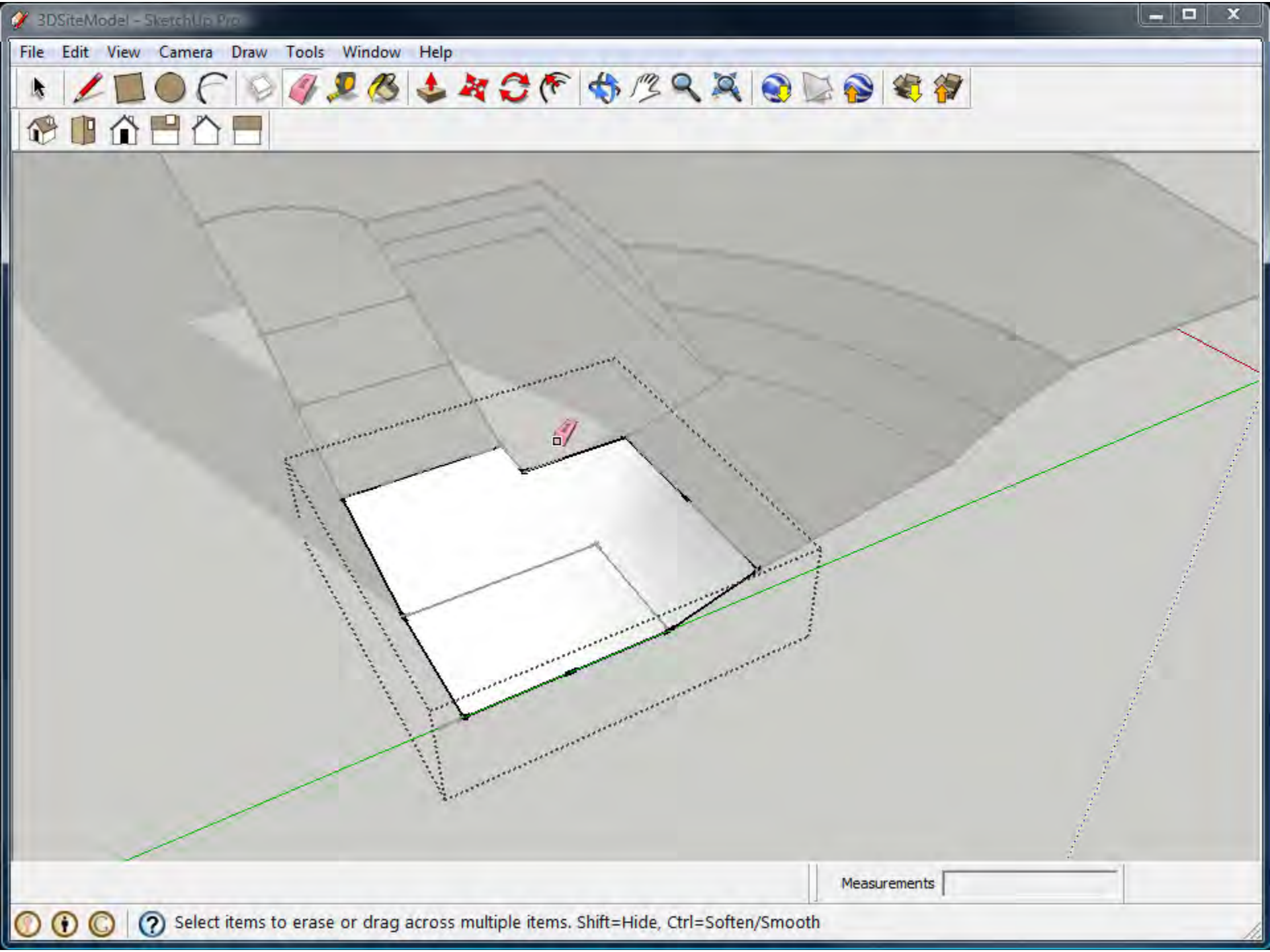
Use the line tool to complete forms for clean contour creation.

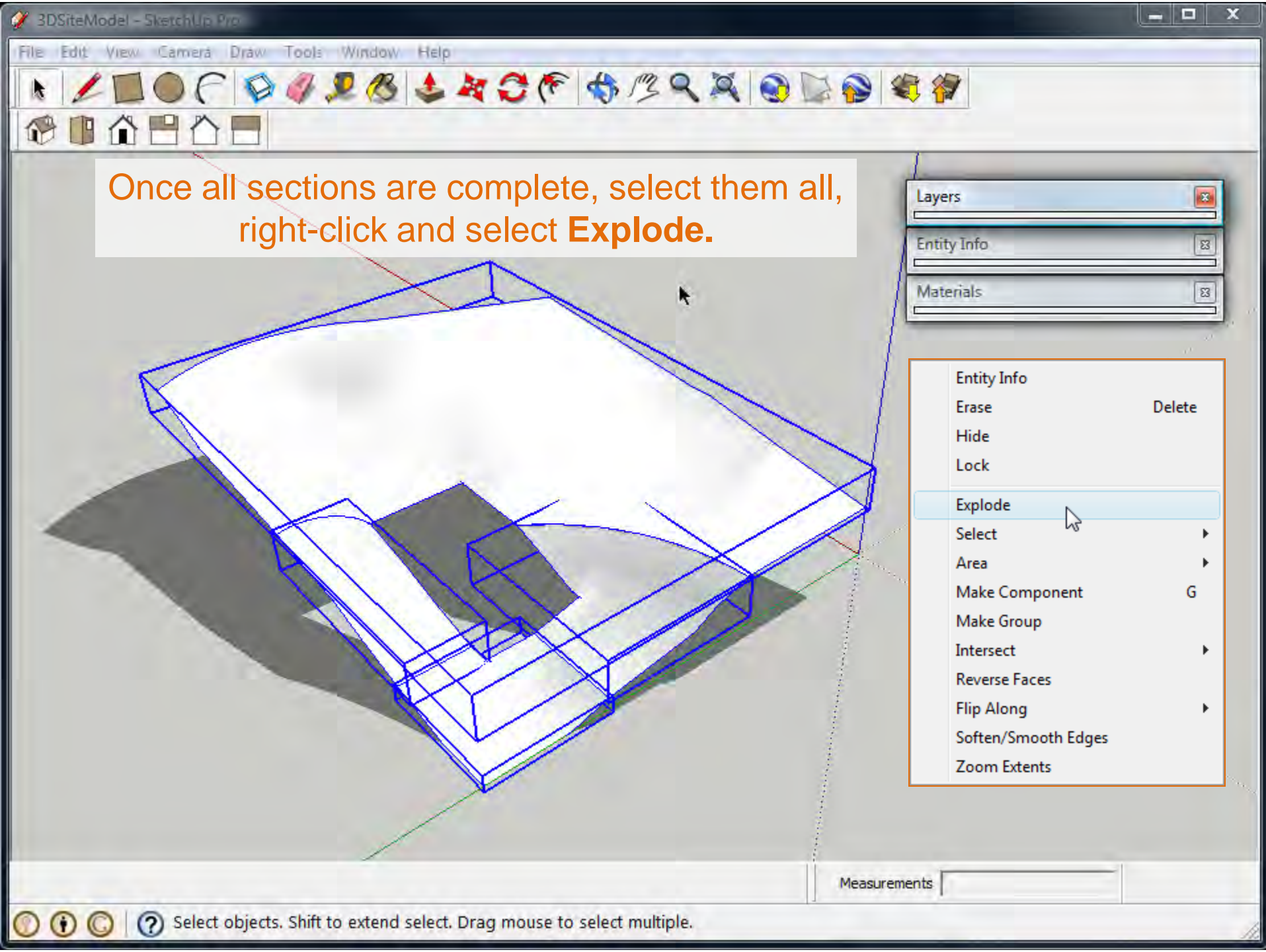


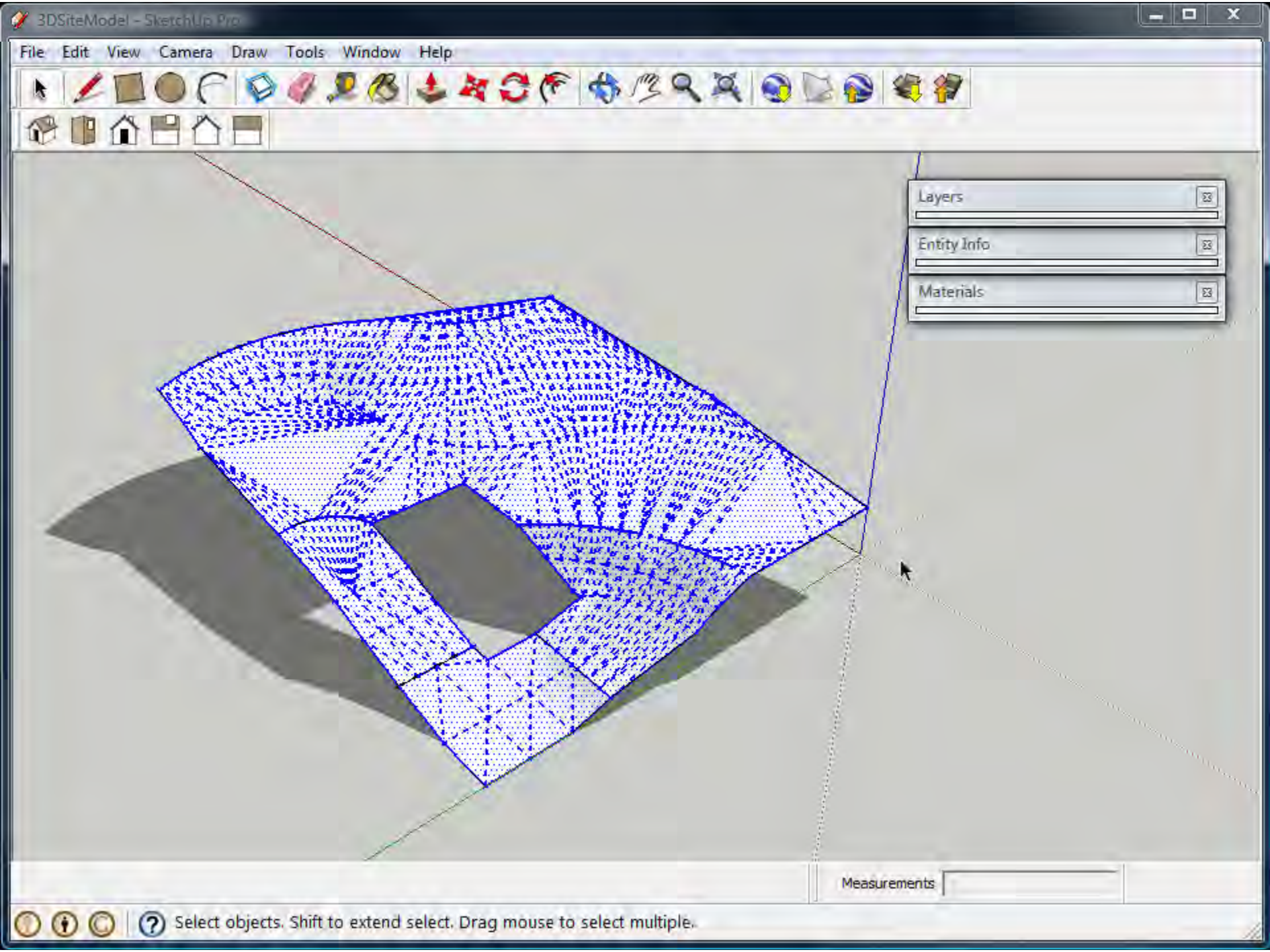
Repeat the previous steps to build the rest of the model in stages.







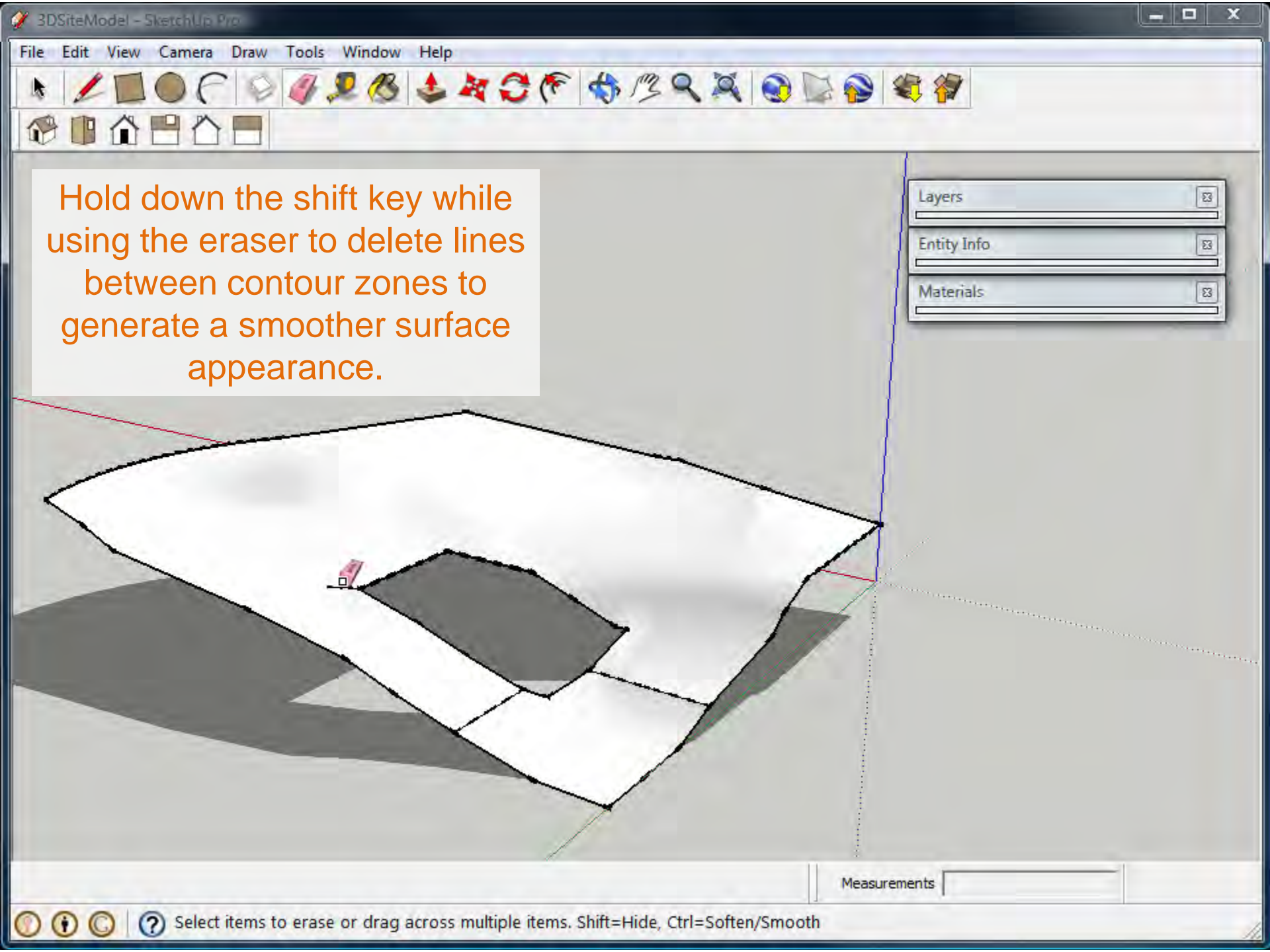




Layers

Entity Info

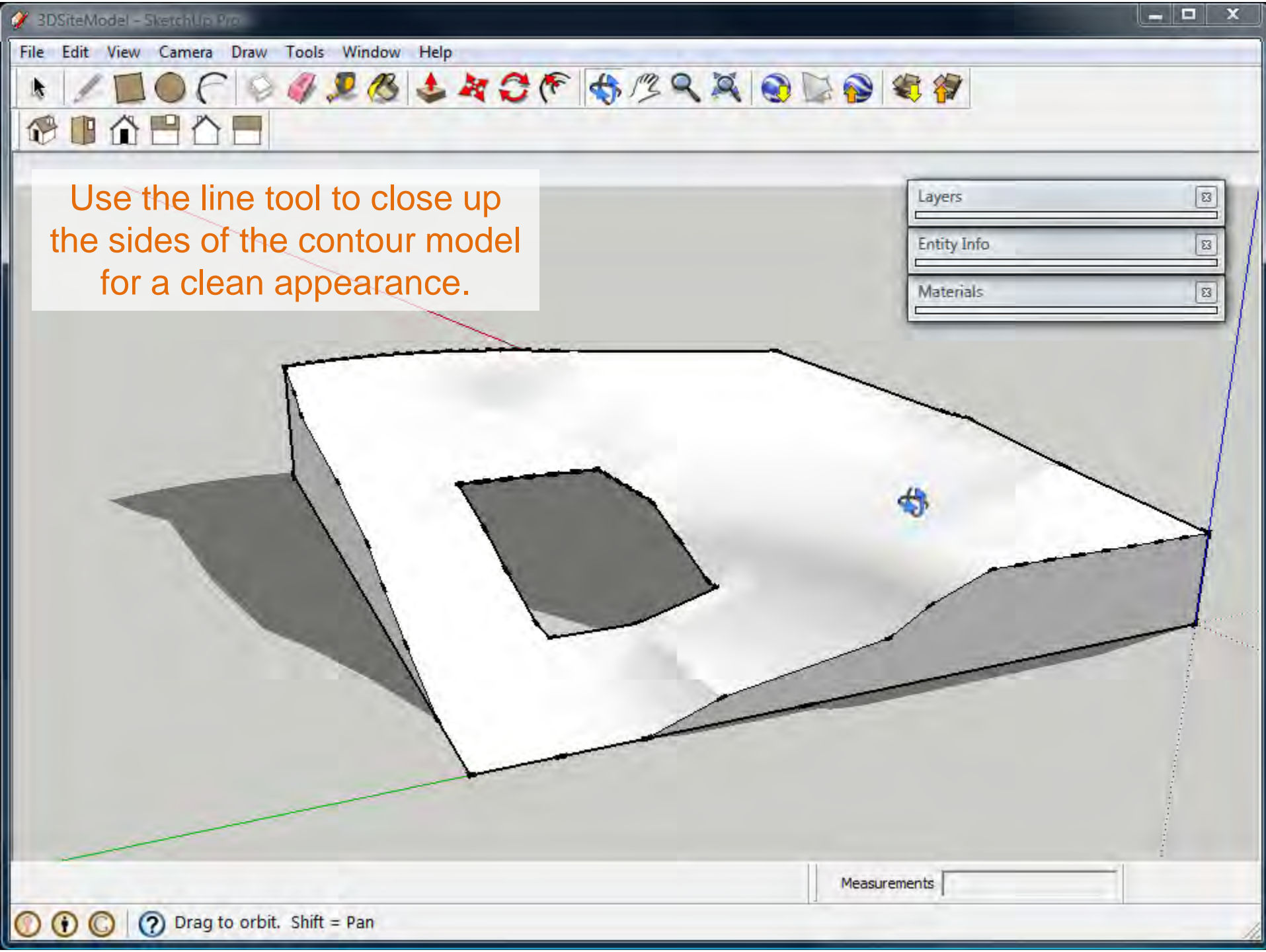
Materials



Hold down the shift key while using the eraser to delete lines between contour zones to generate a smoother surface appearance.

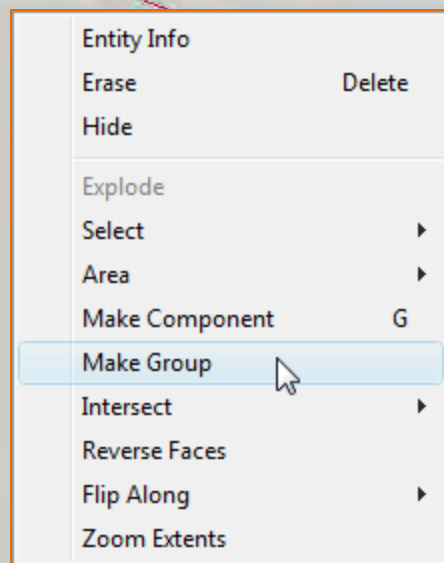
Measurements

Select items to erase or drag across multiple items. Shift=Hide, Ctrl=Soften/Smooth

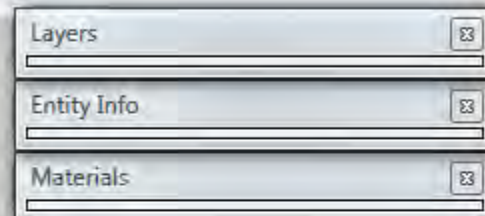


Use the line tool to close up the sides of the contour model for a clean appearance.

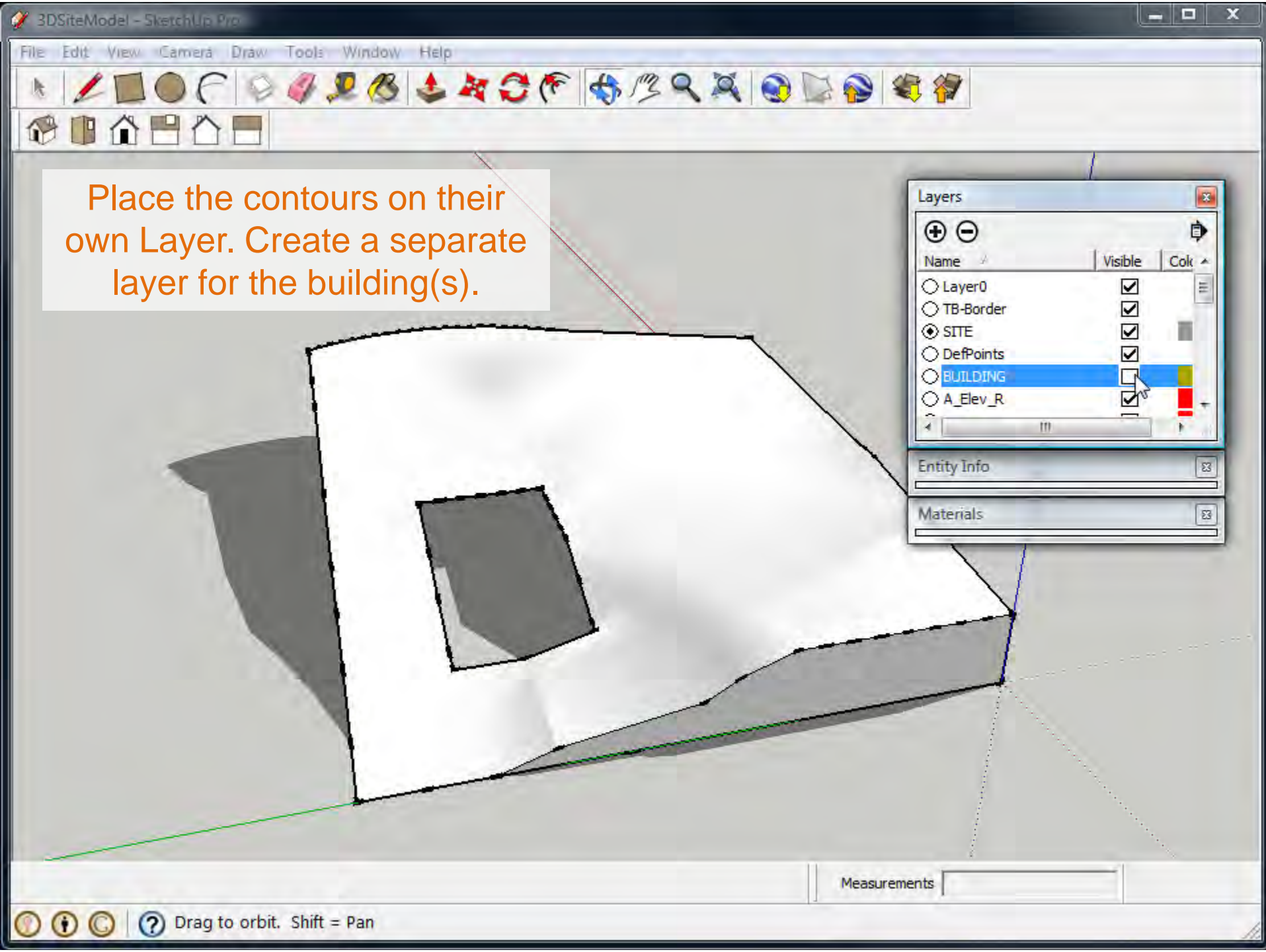
File Edit View Camera Draw Tools Window Help

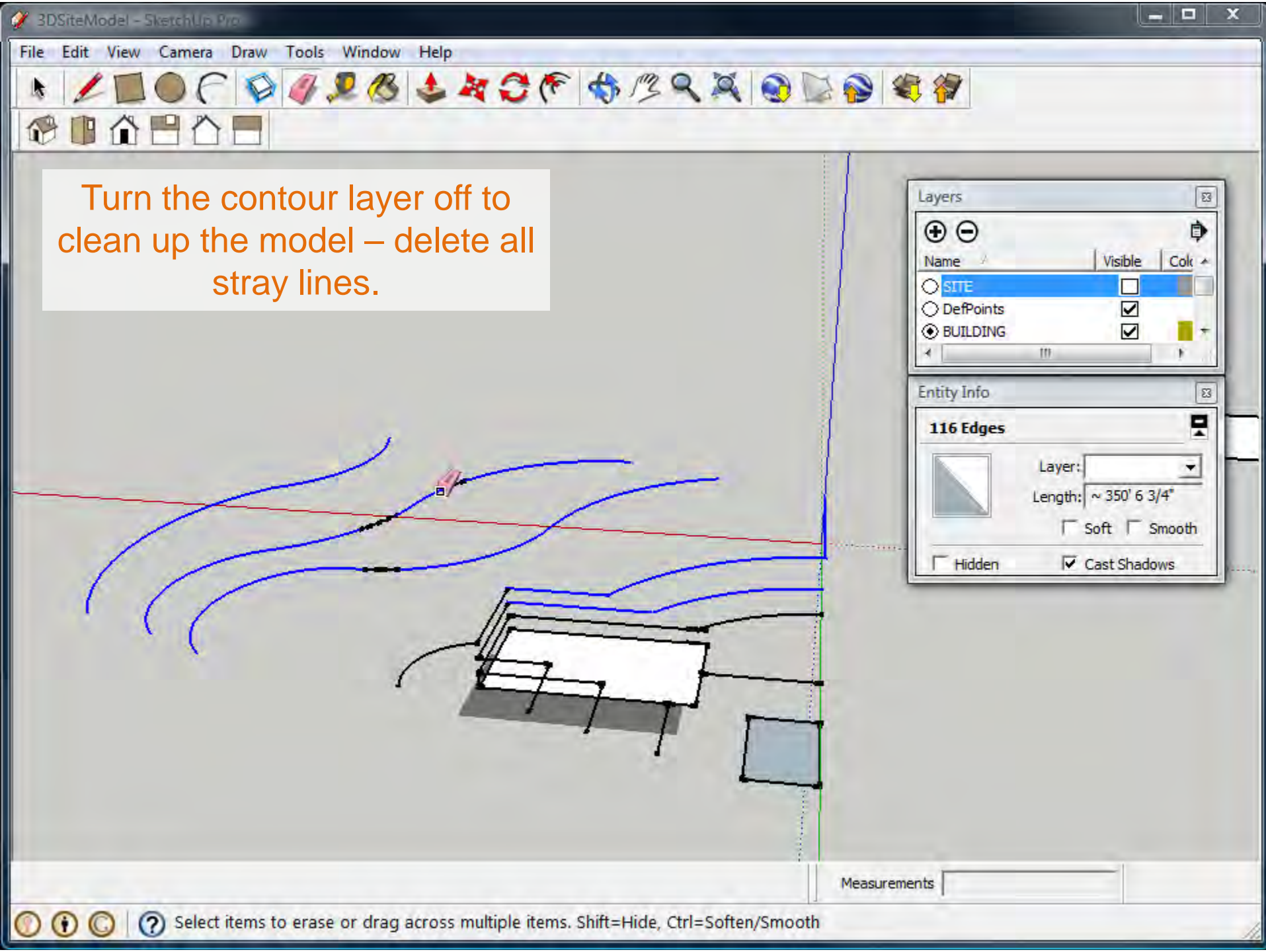


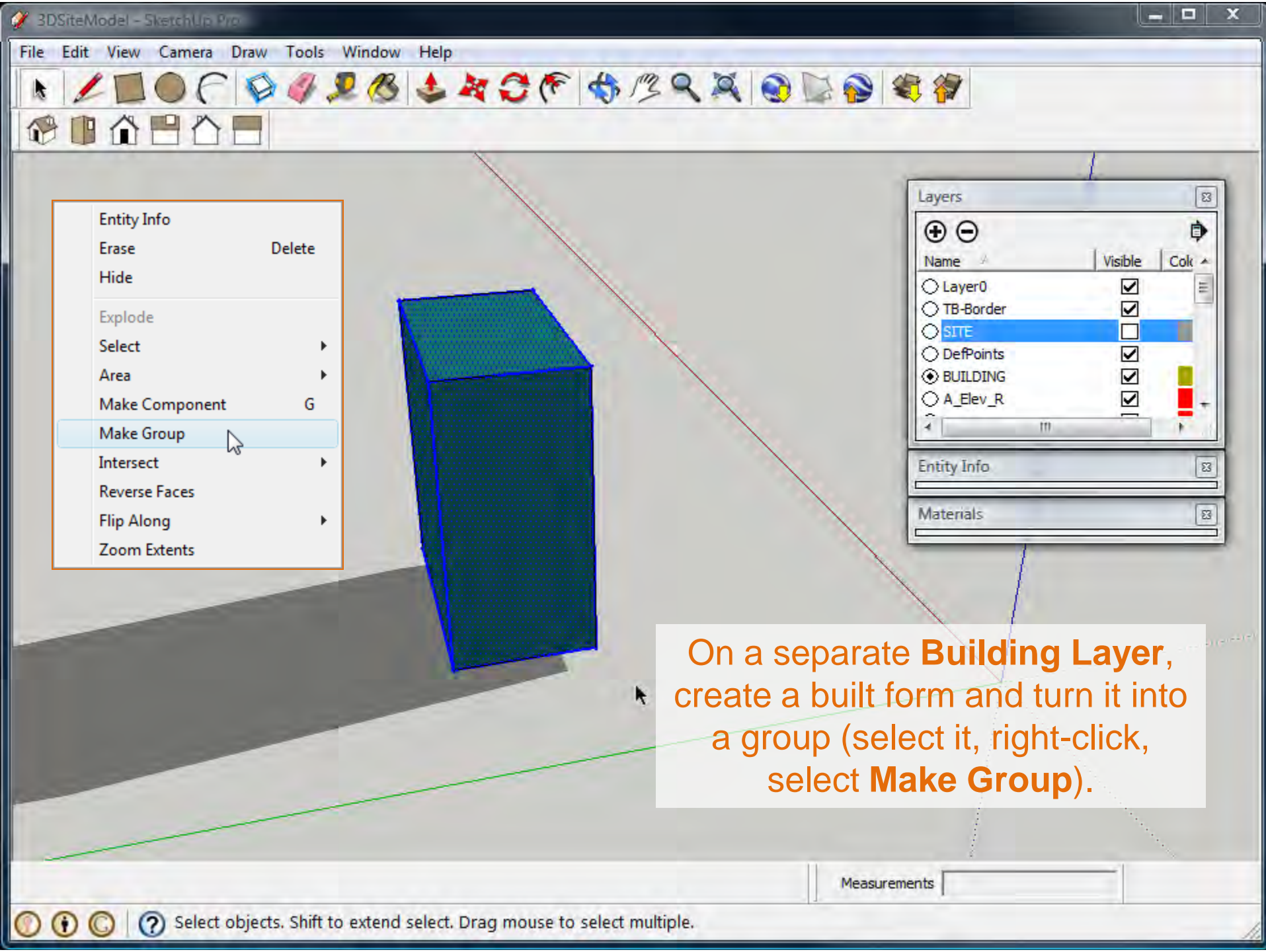
Select all, right-click and select
Make Group.

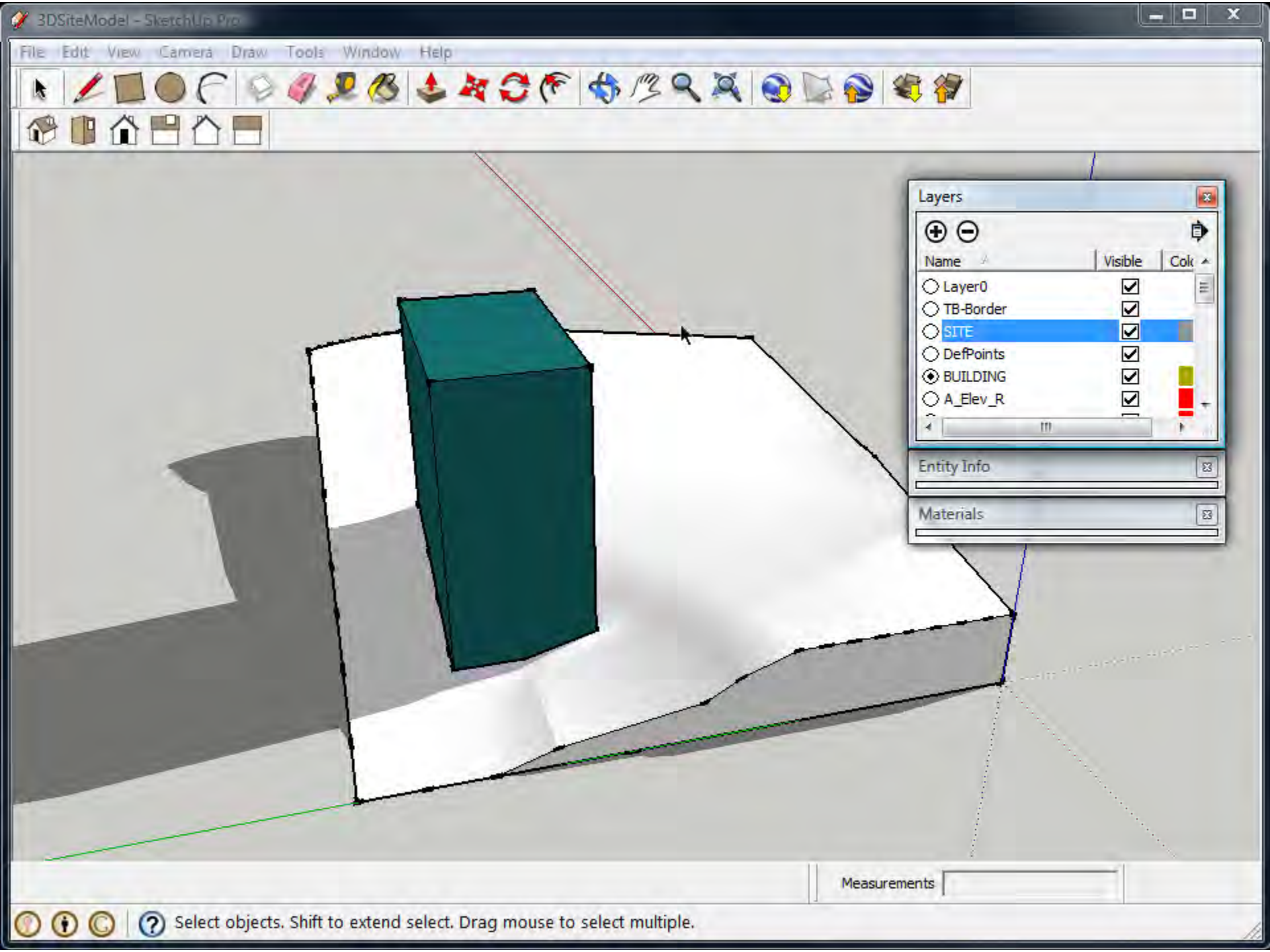


Measurements









Keep the surrounding contextual buildings *neutral* (white or gray) to allow focus to be on your design work.

